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EYE BEADS

THE CHARACTERISTICS OF EYE BEADS FROM THE
EARLIEST TIMES TO THE PRESENT

[PLATE I]

THE following review of the eye beads is the result of studies made during the last five years in many museums in Italy, Switzerland and Germany, as well as in the Metropolitan Museum of New York, where the collections from the Palace of Amenhotep at Thebes and those from Lisht and other, unnamed, places were generously placed at my disposal by the excavators, Messrs. A. M. Lythgoe and H. E. Winlock, both of whom are much interested in this matter and have pointed out to me many interesting points which otherwise might have escaped my attention. The results of these excavations cannot be valued too highly, as they enable us with some degree of certainty to segregate the beads of two distinct periods which hitherto have not been separated—those of the XVIII and XIX Dynasties.

As an aid in dating excavated material beads occupy a very important place, partly because their structure and technique is different in different periods, partly because their ornamentation in no small degree corresponds with that of other objects of the same period. Hitherto the study of beads has been much neglected and has generally been considered less important than that of other objects. The main difficulty in studying beads lies in the neglect with which they have been treated by investigators who rarely have figured and described them properly. Description alone cannot make a lasting impression on the mind of the investigator. While figures in black and white might serve the purpose in some cases, those in colors alone can give us a true understanding of their appearance and nature.

A proper study of beads not only makes us acquainted with the artistic taste of those who made and wore them, but it also will help to clear many obscure points in the relationship of different nations, their trade, migrations and religious beliefs. Many investigators consider that primarily all beads were used as tal-

ismans and amulets and that their value as ornaments was of secondary importance. The most remarkable proof of such opinions is the fact that, to this day, the peasants of Brittany possess numerous (until lately innumerable) necklaces of antique beads preserved as heirlooms from remote centuries, which now pass from hand to hand in the curing of various diseases.¹ Among these antique beads, those with the mysterious eye-spots are counted of special virtue, and it is stated that 1,000 francs could not induce the owner to part with a certain bead.

A study of beads reveals the interesting fact that many types once common and popular soon fell into disuse, but were introduced again centuries later, when they were, however, manufactured by a different technique which permits us to distinguish readily the older from the later examples. The technique of the beads is thus the most important point in their study.

Definition.—A bead is a unit of a necklace and perforated by one or several bores. A glass bead is such a unit made of glassy material, transparent or opaque, but always more or less uniform, a material that has been formed in a state of fusion. The word paste which many use to designate opaque glass, had better, I think, be employed for a material formed cold, like potter's clay. An eye bead is one ornamented with one or more spots resembling eyes, which, however, may be circular, oval, triangular or square.

Description.—The body of which a bead is made may be called the matrix and the color of the matrix the base color. In describing the matrix, mention if the glass is clear or full of blow-holes, the latter being characteristic of the earliest glass beads, though such glass lasted a long time in conjunction with a more perfect kind. It should also be noted if the glass is unusually streaky; such glass abounds during the third and fourth centuries A.D., and is now met with especially in Arabic beads. In describing the colors, a color chart is of great advantage, those supplied by Messrs. Winsor and Newton answering the purpose. To state simply that the beads are "blue, green, yellow and red" conveys no information of value. Different tints are characteristic of different periods, and the color of a bead will often determine at once its age. Certain blues and greens are found

¹ Aveneau de la Grancière, *Les parures préhistoriques et antiques en grains d'enfilage et les colliers talismanes Cello-Armoricains*. Paris, 1897. Ernest Leroux.

only in the New Empire, others in the Late Empire. An intense ultramarine is characteristic of the beads of Rameses IV, as a certain pale blue was a favorite under Thothmes III. A certain deep ultramarine is found only in beads of the eighth and seventh centuries B.C. Yellows are equally characteristic of certain epochs, for instance, the pale greenish lemon and the deep orange of the latter part of the Roman Empire, but especially of the Lombard beads. The fine "rose dorée" appears only during the Ptolemaic-Roman time, while the intensely bright emerald green can be called characteristic of the beads of the sixth century A.D.

Equal importance attaches to the different types of ornamentation. The straight bands appear on glass beads during the XIX to XX Dynasties. The "Wave" band around the girdle of the bead does not appear before the eighth or seventh century B.C., and becomes common in the fifth century B.C. The links, consisting of two wide waves which cross, appear first in the fourth and third centuries B.C., but disappear to return during the latter part of the Roman Empire.

The circular round spots on beads, if not prominent, may be called spots or circular dots, but if prominent had better be called "eyes." They may be simple, or surrounded by rings, the widest of which may be called a zone.¹ Beads of this interesting pattern have been described as "variegated beads in blue, yellow, and white"—a singularly unfortunate description, as incorrect as it is misleading.

Technique.—The technical construction of a bead is of the highest importance, for it varied during different periods, especially as regards eye beads, as will be described in detail later on. Flinders Petrie was perhaps the first to point out that the earliest glass beads, about 1400 B.C. to 600 B.C., were laid over a wire and that in separating them from the rod their ends were drawn out to a short nib.² Later on the ends were cut off by beating, or the beads were made from cut rods or moulded, and yet later they were made from blown glass, all of which methods are of importance to describe. The size of the bore is of the highest importance, because the old Egyptian beads, especially the eye

¹ Flinders Petrie refers to such beads as the "aegis of Bast." (*Hyksos and the Israelitic Cities. Brit. School of Archaeology. London, 1906, pls. XIX E and XIX A.*)

² *Tell el Amarna*, figs. 53–61. Pl. XIII. London.

beads and the melon beads, are only, or principally, distinguished from similar beads of the period from the ninth century B.C. to the third (?) century A.D., by their narrow bore, the latter beads having an enormously wide bore. At the end of the Ptolemaic empire, new technical discoveries were made—mosaic or the millefiori process—and soon employed almost exclusively. As an instance of the importance of observing details, I will only mention one instance connected with the millefiori process. Among the beads of the Palace of Amenhotep are some of a cylindrical shape, one end being capped by a ring of different colored glass, generally yellow, while the base color is deep blue. Somewhat similar beads of slightly different colors are very common in Egypt, and are found in all collections. In museums they are generally classed with the beads of the XVIII–XIX Dynasties. In examining a large collection of many hundred beads of this kind, I found one bead which had impressed on it a fragment of a minute pattern of mosaic glass. This at once revealed the fact that this large class of beads must be dated later than the first century B.C. and probably later than the first century A.D. I placed them in the second century A.D., on account of other characteristics. Later I discovered that Flinders Petrie had already mentioned these beads. In *Hyksos and the Israelitic Cities*, pl. XLVII, fig. 198, p. 60, he says: “brings this cemetery down to the first and second centuries A.D.,” without, however, referring to these beads in particular. There was thus more than one kind of evidence to date these beads with considerable correctness. The same experience was had with the type (PLATE I, Fig. 63) in which the peculiar blue of the base would classify it as old Egyptian. As a rule the eye-spot in this type consists of a simple dot, but one bead of a lot of fifty possessed an eye-spot made of a fragment of mosaic glass. These beads were then placed, also for other reasons, in the middle of the fourth century A.D., and this date was later corroborated in another way.

EYE BEADS. *Classification of Types.*—The only manner in which eye beads can be classified is according to the technique employed in producing the eyes. This is the only classification which shows a chronological sequence, the only one useful to the student of archaeology. Before entering upon details it may be well to describe the eyes first in a general way for the benefit of those who do not wish to make the study of beads a specialty.

Simple Eyes.—The eye consists of a single drop of glass or

other material, more or less deeply pushed into the matrix (Figs. 5-11). It is sometimes possible to determine whether the eye-spot is the result of a semiliquid drop of glass, or whether it was produced by pressing a cut or broken fragment of glass into the soft matrix. The fragment generally shows sharp irregular corners. The eyes in Figures 5 to 11 were all made of drops.

Painted Eye-Rings.—The earliest type of eyes found on clay or paste beads. The rings were evidently produced by pressure and filling in with pigment. In Asia Minor, Greece, and Italy spindle whorls of clay often possess rings produced by impressing a coil or twisted thread or wire into the soft clay before firing. The coil left a pattern which is both ornamental and characteristic. The Egyptian beads of this kind with painted eyes date apparently from the XIX Dynasty (PLATE I, Figs. 1 to 4).

Inlaid Coils.—The eye spot is produced by a drop of glass, but the eye ring or rings by pressing a single or composite coil of glass into the matrix, the coil forming the ring. The earliest seem to date from the XIX Dynasty. Such beads continued to be made until the time of the Ptolemies, when the process of cut off rods was invented, or came into use (Text, Fig. 1; PLATE I, Figs. 29-35, 38, 45-47).

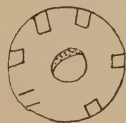


FIGURE 1.—
BEAD WITH
INLAID COIL¹

Stratified Eyes.—The eyes are produced by placing upon the matrix a drop of glass and rolling it in while the matrix is soft. On top of this zone another drop of a different color is placed and similarly rolled in. When the eye has received as many superposed drops as required, the sides of the cone are ground off in order to permit the lower layers to appear on the surface as rings. If, however, the drops have been properly graded from larger to smaller, the grinding off is not necessary. In some instances it appears that the whole eye was made separately and then pressed in the bead matrix

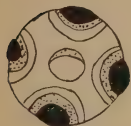


FIGURE 2.—
BEAD WITH
STRATIFIED
EYES²

(Text, Fig. 5; PLATE I, Figs. 40, 41) or the whole bead was made up of several shields of such superposed drops, previously ground off. Such eyes date from the time of the XIX

¹ Cross section of a bead of the eighth century B.C., with three rings produced by pressing a simple coil into the matrix which forms the eye-spot. The square small fields are cross sections of the coils.

² Cross section of a stratified eye bead with four eyes, showing the saucer-like appearance and positions of the layers. The central black is the eye-spot.

Dynasty and continued in use until the time of the Ptolemies, after which time the process fell into disuse, the process of cut off rods having been invented, which permitted the artisan to produce eyes with greater facility and with less skill (Text, Figs. 2, 5-18; PLATE I, Figs. 54, 56-59, etc.).

Dipped and Cut Off Rods.—This process first appears in the fifth century B.C., but did not become common until the last part of the first millennium B.C., after which time it superseded the stratified process entirely. A rod of glass was dipped in successive baths of liquid glass of alternating colors, and, when cool, hacked off into disks, each disk forming a ready made eye which had only to be pushed into the soft matrix of a bead to form an eye with rings (Text, Fig. 3; PLATE I, Figs. 55, 60-64). Of this process we have two distinct types: one in which the eye

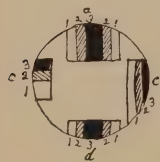


FIGURE 3.—BEAD
MADE WITH CUT
OFF RODS¹

consists of a central spot surrounded by one or more rings (Text, Figs. 3, 4), and one in which the eye is more complex, surrounded with rings, dots, bars, etc., produced by a number of rods having been fused into one. This is the millefiori process proper. This process is the one used to this day.

DETAILED DESCRIPTION. Painted Eye-Rings (PLATE I, Figs. 1-4). This type is principally confined to paste beads of the XVIII Dynasty, at least I have been unable to date any earlier. One bead is from the Palace of Amenhotep, but none was found in that of Kuenaten at Tell el Amarna. They are thus older than the eye beads of glass, and it appears probable that the latter resulted from an endeavor to produce eyes with rings on glass beads similar to those produced so readily on paste beads by a simpler method. The latter method is, if I am correct, thus slightly earlier. In general the beads are monochrome, shades of the blue and green characteristic of the period, the impressed rings having been filled out with pigment slightly deeper in color, but of the same shade as the matrix. The only bead known to me of this kind consisting of two colors is one in the Archaeo-



FIGURE 4.—
VIEW OF
ROD²

¹ Cross section of an eye bead, the eyes produced by cut off rods. *a* and *b* are perfect eyes, the left *c* is a mere chip, cut off diagonally, while the one to the right, *c*, is cut off longitudinally, thus appearing on the surface as parallel bars.

² Exterior view of a rod used to produce eyes, the rod being cut off in thin slices, each slice producing an eye with rings.

logical Museum of Florence, Sala VII (no number or date). This bead is white, with the eye-spots and rings blue-black or black. It is strung in connection with beads of uncertain date probably derived from different finds, like almost all the necklaces in this collection, procured from or donated by private collectors. I think this bead can be dated to the XVIII Dynasty. The artistic expression of these beads is simple and charming, more soft and harmonious than the eye beads of glass with their gaudy colors, which, seen at a distance, are, however, more effective and striking. Similar beads of paste are common in Egypt, and tourists must have carried away innumerable specimens, all private collections containing many.

Earliest Glass Beads.— In his work on glass, Kisa¹ states: "how far back these glass beads date is not to be precisely determined, but anyhow they go back to the XII Dynasty." There is no evidence that this is correct, and so far as I know there are no glass beads as early as that dynasty. The very remarkable collections of beads and other material excavated by the expedition of the Metropolitan Museum, in tombs of the XII Dynasty, contain not a single bead of glass. Kisa himself (p. 120) states that the earliest dated glass beads are those two with the cartouche of Queen Hatshepset.² One of these is pale blue and now in the private collection of Professor Wiedemann in Bonn; the other is of a dark or blackish green glass, now in the British Museum. Upon this latter some doubt has been thrown, some claiming that it was not of glass but of obsidian. Kisa, however, says that chemical examination has decided in favor of glass. These two beads, both with the Queen's cartouche engraved, are also the oldest glass beads known with certainty. If glass had been known before the time of Queen Hatshepset, it seems probable that it would have reached a greater development in her time than is indicated by these two beads—one pale blue, one dark or black-green—with the queen's name. In the time of Amenhotep III, glass beads had, however, reached a great perfection. The collection made by Messrs. A. M. Lythgoe and H. E. Winlock in the Palace of Amenhotep at Thebes contains magnificent specimens of glass beads, but, though they are of

¹ Anton Kisa, *Das Glas im Altertume*. Hiersemanns Handbücher, Vol. III. Leipzig, 1908.

² The Hatshepset beads were first described and figured by J. Gardner Wilkinson, *Manners and Customs of the Ancient Egyptians*, Vol. II, p. 141. London, 1878.

brilliant colors and made with great technical skill of fine, hard glass, their ornamentation is devoid of rings, bands, or eye-spots, so characteristic of a later period.

Beads with Eye-Spots. Eye Beads.—These beads, as has been stated, can be divided into three classes according to the technique used in producing the eye. Fortunately these processes follow each other in chronological order, and, once the technique is understood, a clear idea of their chronology is possible. The earliest beads with eyes can be divided into two series according to the presence or absence of eye-rings. Simple eye-spots, and beads surrounded by rings, continued to be in use at the same time, but of the series with eye-rings we can conveniently separate two types. One is simple, the eye being surrounded by one or two wide rings, the other is more complicated, with alternating rings in different colors, generally characterized by the narrowness of the rings. The simpler type appeared shortly after the appearance of the eye bead, the latter type developed later. It is of importance to determine the earliest appearance of each type or series.

Simple Eye-Spots.—The earliest eye beads of this kind seem to be those mentioned by F. L. Griffith (*Tell el Yahudiyeh*, Egypt Expl. Fund, Mem. 7, London 1890, pls. XV and XVI, p. 47). They are described as "glass beads, variegated yellow, white and blue with red eyes." Some of these from tumulus IV, 8, were found with a glazed steatite scarab of Ra-men-Kheper or Thothmes III (XVIII Dyn.). Other beads from tumulus IV, 2, are described as "beads of glass, opaque blue and greenish white (?) with red eyes." Found with a scarab of Rameses III (XX Dyn.). These two sets of beads appear to be similar. On page 48 of the same paper, we read: The general result of these excavations in the tumuli is to show that they belong to the XX Dynasty at least as early as the central period. Out of the first seven tumuli, there is nothing certainly later or earlier than this—the scarabs of Rameses III and IV tend to fix the date. The scarab of Thothmes is thus disregarded.

The next description that we have of the earliest eye beads is that of Flinders Petrie (in *Illahun*, London 1891, pl. VIII, fig. 10). This is a bead of mixed eye-spots and twisted threads and was found with a scarab of Rameses II (XIX Dyn.). This bead has apparently some eyes with rings, while others are simple. It is the earliest eye bead known.

In *Ehnasya* (Flinders Petrie, *Ehnasya*, Egypt Expl. Fund, Mem. 26, London 1905, pl. XL, fig. 16, p. 34), Petrie figures two beads with black base and white spots, some of which are divided by bars, which do not reach to the bore openings. They are exactly like the one on PLATE I, Figure 5, of this paper. His description reads: "In one case a reed mat was underneath the body, and the black and white glass beads with the carnelian ring on pl. XL, fig. 16, were with another. These beads are of the styles made during the reign of Thothmes III." Had these beads been so early, samples of them would undoubtedly have been found in the Palace of Amenhotep at Thebes or in Akhenaten's city of Tell el Amarna. As none were found in either place, it seems probable that those mentioned by Griffith and Petrie in connection with Thothmes III were not made in his reign and that the scarab with his cartouche was one of the common commemorative type bearing his name but made after his death. The eye-spots of these beads are perfectly circular, with even margins, which could hardly have been attained in the first efforts to make beads. As the origin of the type is to be looked for after the Tell el Amarna period, no earlier date can be assigned to these beads than the XIX Dynasty.

Fortunately for our knowledge of the earliest types of these beads, the Metropolitan Museum contains a magnificent collection of glass beads excavated at Lisht by Mr. Mace and his collaborators. I was permitted to arrange these types, and the result has been most instructive, revealing a number of varieties of eye beads, the chronology of which has until now been in doubt, while the beads themselves have never been properly figured or described. The principal varieties are seen on PLATE I, Figures 5-41. It will be seen that in this collection are a few beads of the types described by Petrie and Griffith in connection with the Thothmes scarab (Fig. 5), but which, in conjunction with the others, can be referred to the XIX Dynasty, or if we follow Griffiths' summary on page 48 (*Yahudiyeh*), to the XX Dynasty. In all these beads with simple eye-spots, these latter are all arranged in a single row around the equatorial of the bead. The Murch collection in the same Museum contains a number of similar types, which undoubtedly belong to the same period as those of Lisht. The two collections seem to give us a fair idea of the eye beads of glass from the best Egyptian period. Especially interesting for the chronology are those on PLATE I,

Figures 25 and 39. They are identical with those described by Petrie (*Meydum and Memphis*, III, Brit. School. London, 1910, pl. XXVIII, figs. 129-132, p. 37), "yellow and black beads and scarab of XIX Dynasty."

Single eye beads of white base with blue, yellow, and red eye-spots continued to be made much later (Woolley and Maciver, *Karanog*, Univ. of Penn. Publications, Pt. 40, No. 7843, 7906: Philadelphia, 1910). These are assigned by the authors to the first and second centuries A.D. Eye beads with single spots are remarkably rare in the Italian tombs of the ninth to the fifth century B.C. They are in use again later in the Lombard or Merovingian beads during the sixth century A.D., as can be seen, for instance, in the Museo Nazionale, Rome (from Castel Trosino, Nos. 65-68, etc.), or in the Stuttgart Historical Museum, Case 31 (from Alb). These latter beads are wonderfully similar to those of the XIX Dynasty, like those figured on PLATE I, Figure 6. Simple eye-spots became once more common during the Renaissance, or after the time of Marco Polo, when the Venetians began to manufacture beads for the oriental nations, etc. Witness, for instance, the innumerable beads found in comparatively modern tombs of the natives of Africa and America.

Inlaid Rings.—Before we consider the eye beads with eye-rings, it will be necessary to note the type of ring, produced by simply impressing a ring or coil on the bead, either around the eye-spot, or isolated. In the former the effect is an eye with rings, in the latter we rarely find more than one ring, the matrix of the bead forming the eye-spot. These beads can be conveniently considered under two distinct series: one in which the eye-ring is produced by a twisted coil of glass threads, and one in which we have an eye-ring made of a single, thicker glass thread. The former is illustrated on PLATE I by Figures 29-32, etc., the latter by Figures 45-47. The former is rare in collections, but the latter is very common, especially in Italian tombs.

Inlaid Coils (Text, Fig. 1, PLATE I, Figs. 29-32, 33, 34, 35, etc., 45-47).—Eyes produced by a combination of simple eyes and inlaid coils are contemporary with those of the XIX Dynasty made by stratification alone. Such eye beads are among the most beautiful as well as the most complicated of all beads. The finest I have seen are those of the Murch collection, Figures 29-32, which can be dated, I think, with certainty to the time of Rameses II. The coil used in producing these eye-rings

consisted of twisted threads of glass of two distinct colors, generally blue and white, or black and white. They were sunk in the matrix around the eye, and are generally characterized by the ends of the coil not meeting, sometimes stopping some distance from each other, sometimes overlapping (PLATE I, Figs. 35, 38). The effect is rich and as beautiful as the process was difficult, requiring much care in execution. The earliest mention of such beads is by Flinders Petrie (*Illahun*, London 1891, pl. XVIII, fig. 30): "black, with blue pattern. Eye beads, black, white, and yellow common." The description does not refer to the structure and does not accentuate the appearance of the bead, but a glance at the figure shows it to be of the same type as those in the Murch collection in the Metropolitan Museum, a twisted coil of glass, with minute eyes on each side, and a rim of a twisted coil around the bore of the beads. Petrie's beads were found with a scarab of Rameses II. Beads with such coils, but without eyes, are found in the Lisht collection excavated by Mr. Mace. The Murch collection, however, makes us acquainted with many varieties, the base of which is pale blue (PLATE I, Figs. 29-30) or pale lemon (Fig. 32) or bright orange (Fig. 31), while the coils are made up of black, white, and blue threads (Figs. 29-34, 35, 38). Another type consists of sherry-colored base, with twisted threads of black and white, or brown and white. This pattern does not seem to have lasted long, and I do not know of any later than the XIX-XX Dynasties.

The Egyptians of this period also employed twisted glass threads in making the rims for glass vessels, a practice revived by the makers of mosaic and millefiori glass during the early part of the Roman Empire. During the third and fourth centuries A.D., the twisted thread ornament came once more into vogue, and beads with such ornaments are well represented in the Metropolitan Museum. The color of these beads of the fourth century A.D. is generally fine, but their technique is clumsy, the eye-spots ranging from microscopic minuteness to unusually large size. The Venetian glass-makers have made use of such inlaid coils since the time when they began to make beads, and some of their earliest beads are now sometimes found as intrusions in antique collections, as, for instance, in the Corchiano collection in the Museo Etrusco in Rome, and are generally dated from the fifth century B.C. One of the

best necklaces (XIV, No. 6036-6055) contains a bead, the second, left from centre, with eyes of dark green, eye-rings white. The rings consist of three twisted threads which are so carelessly impressed on the eye-spot that they extend over on the matrix of the bead. This technique was not used in connection with eye beads of the fifth century B.C. Searching the records of the necklace, Dr. Giglioli found that it had not been excavated by the Museum authorities, but had been purchased from a dealer, Sr. Benedetti, September 24, 1894. By a fortunate coincidence, a few weeks afterwards, I discovered in the Linden Museum in Stuttgart, an exactly similar bead, of the same color and technique from Ashanti, and of undoubted Venetian make. The two beads resemble each other sufficiently to warrant the belief that they were actually made by the same artisan.

Eye-Rings of Single Thread.—Beads, generally of a pale dull blue, sometimes blue-gray or blackish, are found in Italian and Syrian tombs of the ninth to the fifth century B.C. They are especially common in the eighth century B.C. A necklace in the Museo Etrusco, at Rome, from Falerii, XXXII, is found with a scarab of Pharaoh Piankhi (about 766 B.C.). Nearly all the necklaces in this collection contain numerous Egyptian paste beads, which would indicate that intercourse with Egypt was lively during that time. Still it is doubtful if these blue beads, with the eye consisting of a simple glass ring pressed into the matrix, could possibly have been manufactured in Egypt. These pale blue beads are so common in Italian tombs of this century that almost every Italian museum contains thousands. The beads are irregular and so badly made that the rings have frequently dropped, leaving a cavity in place of the glass filling. Most of these beads have two or three eyes (PLATE I, Figs. 45-47).

Beads of another type, larger in size, finer in color, and better made are found, but scarce, in the same tombs. Their color is often intense ultramarine blue, and the inlaid rings mostly deep yellow chrome. The Italian authors refer to both classes of beads as "turchino" without considering the distinct differences in shade and quality. One of these beads is Figure 48, PLATE I. This fine type of bead was perhaps made in Egypt. They have been described by Giovanni Lanza (*Lazio*, Rome, 1905, pl. XIII, fig. 10), and by almost all investigators who have occupied themselves with Etruscan archaeology.

Stratified Eye Beads with Rings.—The technique of these

beads has already been described in the beginning of the paper, page 5. Text Figures 2, 5-14 all illustrate the type. The whole construction of the eye can be compared with a set of differently colored saucers, of different sizes, the largest of which are at the bottom and the smallest at the top. The invention of this method caused a veritable revolution in the production of beads, and the method undoubtedly soon became very popular. There are no beads with stratified eyes in the collections from the Palace of Amenhotep, none from the city of Akhenaten at Tell el Amarna. In the excavated material from Lisht, stratified eye beads are numerous, and many are found in the Murch collection. The type continued to be made until the fourth or the third century B.C., but was about that time superseded by the technique of cut off rods.



FIGURES 5-8.—STRATIFIED EYE BEADS

There are two distinct classes of this type of beads. One is represented by the Lisht beads (PLATE I, Figs. 17-39). This type is the earliest, dating from the XIX Dynasty, or if we follow Griffith (*Yahudiyeh*, p. 48) from the XX Dynasty. As regards the chronology, the same arguments can be used as in the discussion of the single eye beads (pp. 5 to 10), and need not here be repeated. The other class is represented by Figures 40 to 54. The latter differs from the former in having the eyes approximated, or in rows frequently surrounded by many rings, of various colors. The eyes of this type more truly resembled real eyes than did those of the former type. The first to describe these beads

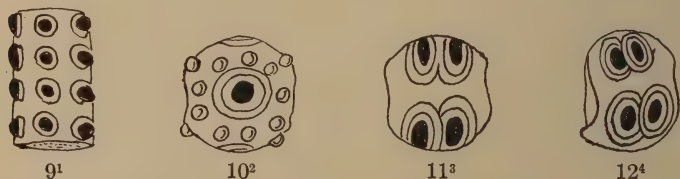
¹ Surface view of a stratified eye bead, the eyes consisting of shields, four of which have been used in building up the eye. XXII-XXIII Dynasties, Egypt.

² Surface view of a stratified eye bead with six eyes, three of which are represented. Fifth century B.C.

³ Lopsided eye bead with stratified eyes, two of which are shown. The larger eye caused the matrix to extend. Fifth century B.C.

⁴ Surface view of a stratified eye bead with five rows of eyes. Fifth century B.C.

was Flinders Petrie (*Hyksos and the Israelitic Cities*, London, 1906, pl. XIX, and *Meydum and Memphis*, London, 1910, pl. XXVII, figs. 129 to 137). But before entering into the details of the chronology it will be well to point out that these beads were made by two different processes of stratification. In one of them the eyes were built directly on the matrix of the bead and rolled in (PLATE I, Figs. 43, etc.); in the other the eyes seem to have been made separately like shields, several shields composing a bead with no other matrix than a core. The former process is represented on PLATE I by Figures 50 and 51, etc., the latter by Figures 40 and 41. The lines on the bead show clearly where the eyes join (Text, Fig. 5). There is no bead matrix visible, and if there is any, it is hidden below the shields.



FIGURES 9-12.—STRATIFIED EYE BEADS

Beads like those illustrated on PLATE I by Figures 40 and 41 are undoubtedly much earlier than those of Figures 50 to 53, and possibly earlier than that of Figure 42. The chronology of eye beads is of very great interest for the reason that the greatest number are found in Italian tombs of the fifth century B.C., being singularly absent from the tombs of the preceding centuries. If these beads are found in Egypt at an earlier date, we must in some way account for their absence in Italian tombs of the eighth and seventh centuries B.C. Three explanations are possible. (A) Petrie dated his beads too early, and the Italian beads are dated too late. In this case the Italian and the Egyptian beads might be of the same time, and from the same factories perhaps, as it is probable that they were all made in Egypt. (B) The

¹ Stratified eye bead, cylindrical form, eyes projecting and in rows. Fifth century B.C.

² Surface view of eye bead with stratified eyes and knobs. Fifth century B.C.

³ Stratified eye bead with paired eyes. Fifth century B.C.

⁴ Stratified eyes, in pairs. Bead lopsided. Fifth century B.C.

Egyptian^r beads were discontinued during two whole centuries. This is not probable, though I think that Petrie has somewhere expressed such an opinion, though I cannot now lay my hand on the record. (C) The communication with Egypt was interrupted during the eighth and seventh centuries B.C. This again seems improbable, because we find in the tombs of Veii and Falerii, near Rome, innumerable Egyptian paste beads, dated by the scarab of Piankhi, and entirely similar to the degraded type of paste beads of that time in Egypt; and in all these tombs of Etruscan times there are no beads similar to those described by Petrie (PLATE I, Figs. 40, 41), and very few, if any, like those of Figures 50, 51, 54.

We will now see what Petrie says upon this subject (*Illahun*, London 1891, pl. XXIX, figs. 52, 53); these being beads similar to the one figured on PLATE I, Figure 42. Page 26 he says: "The glass beads of plain colors have just vanished; and the eye beads of the Ramessid time (pl. XVIII, fig. 30) have turned into a rather scarce class of blue eye beads, with fine veins of brown and white around the eye (pl. XXIX, figs. 52, 53)." This is under the heading of the XXII Dynasty. In *Meydum and Memphis*, London, 1910 (pl. XXVII, figs. 129 to 137), in regard to a bead No. 135, he says: "The eye bead 135 is white with blue spots, a brown ring around them and a green wavy line." This bead is under the heading of the XIX Dynasty. Petrie's figure 137 resembles my Figure 43. Of this he says, page 37: "A bronze ring and a green bead with blue spots surrounded by goldy-brown lines and white." Such beads are well known, especially in the Delta, where they are dated to the XXIII Dynasty. In *Hyksos and the Israelitic Cities* (Brit. School of Archaeol., London, 1906), Petrie, pls. XIX and XIX A, figures a small number of these beads. The tops of the plates are marked XXIII (?) Dynasty. The beads of Petrie's figure 66 are less like our beads, having three eye-rings in a row, but those under figure 307, eleven in number, seem to resemble exactly my Figure 42. These are from Yehudieh. Pl. XXXVI, from Tell er Retabeh (Raamses), contains two beads, one of which resembles my Figure 42, the other Figure 47. Both are marked "about XXIII Dyn." If I interpret correctly these opinions, set forth at different times by Petrie, it would seem that he wishes to date these beads not earlier than the XXII Dynasty and possibly later than the XXIII. This brings us down to the middle of the eighth century

B.C. All these varieties mentioned by Petrie seem to be of one type, blue eye-spots surrounded with brown rings. In Italy not one of these beads has been found earlier than in the fifth century B.C. See, for instance, the Barberini collection in the Museo Etrusco, Rome; also in the Mariano Rocchi collection from Perugian tombs.

The earliest glass beads with stratified eyes found in Italian tombs come from the "Tomba della straniera" at Vetulonia, and are now in the Museo Archeologico at Florence. The bead is represented on PLATE I, Figure 43, and requires no further description. Two scarabs near by seem to be of the XXII or XXIII Dynasty. But beads of this type are so rare in Italian tombs, that I know of few that can be dated to the ninth or eighth century B.C., with certainty. A bead like Figure 50 but with smaller bore is exhibited in the Museo Etrusco, Rome (under XXXIX, 3965, Falerii), together with beads of the eighth century B.C. Another tomb find near by (Falerii, No. XXXII, No. 4186) contains 23 eye beads similar to Figures 45, 46, 47, 51, 53, 54 of PLATE I. The pendants in this necklace are like some of the eighth and seventh centuries, but the beads resemble those of the Italian tombs of the fifth century B.C. Both of these finds are thus doubtful, though they tend to show that these beads or bead types appeared earlier than the fifth century B.C. The latest dated eye beads with stratified eyes come from the fourth century B.C. (Fig. 57, from Priene, in Asia Minor,¹ which cannot be dated earlier than 390 B.C.). Of the eye beads of the third century B.C. of similar types I have no record. Those from Zollikofen, in the Berne Museum, are of a distinctly different type.

Distinct Types of Stratified Eye Beads.—There are many different types, but it frequently happens that several are used together on the same bead. The following are most readily distinguished.

A. Eyes separated and placed in a single row around the equatorial of the bead (PLATE I, Figs. 12–25; Text, Fig. 6).

B. Eyes in two rows, sometimes approximated so as to resemble animal eyes (Text, Fig. 12; PLATE I, Figs. 50, 51, 53, 54). Sometimes alternating (Fig. 55), having three eyes at one pole and four minor ones at the opposite end.

C. Eyes relieved by interspersed knobs (Text, Figs. 10 and 15).

¹ Private collection of Prof. Dr. Paul Wolters in Munich, who kindly permitted me to make a copy.

Some of these beads are cylindrical (Fig. 15), others spherical (PLATE I, Fig. 52; Text, Fig. 10).

D. Eyes placed in many parallel rows (PLATE I, Fig. 54; Text, Fig. 8).

E. Eyes small, placed in groups on a specially colored, most generally brown, field (PLATE I, Figs. 55, 56; Text, Fig. 14). Fifth century B.C.

F. Eyes rather simple, strongly projecting. Bead generally square. Plate I, Fig. 49, view from the side. Appears confined to the eighth century B.C.

G. Two kinds of differently colored eyes alternating. One set paired, the other in a single row (Text, Fig. 13). Only known from the fifth century B.C.

H. Eyes small, elevated like knobs, placed in parallel rows running from pole to pole, the bead being cylindrical (Text, Fig. 9). Fifth century, B.C.



FIGURES 13-16.—STRATIFIED EYE BEADS

J. Bead made up of two or three three-cornered beads, with strongly projecting eyes, the latter being in the corners of the beads. Characteristic of about the third century B.C. (PLATE I, Fig. 59. Text, Fig. 17 is a single eye-knob.)

K. The eye or eye-spot is formed of a comma pressed on a stratified shield. This type occurs in two widely separated periods: the XIX Egyptian Dynasty and the fourth and third centuries B.C.

¹ Surface view of stratified bead, type G, described above. Two of the eyes are black and yellow, while the smaller eyes are blue and white. Fifth century B.C.

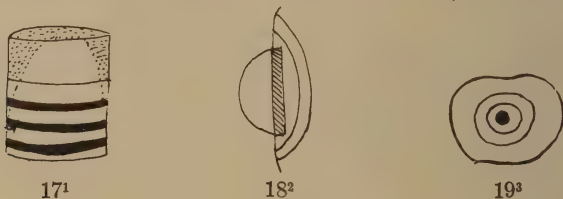
² Stratified eye bead, with two classes of eyes, one isolated, the other in sets of seven in a shield of white and brown, all produced by stratification. Type E.

³ Cylindrical eye bead, stratified. The knobs arranged in rows at the ends. Fifth century B.C.

⁴ Stratified eye bead, with comma eyes. Fourth to third century B.C. Type K.

L. Gold-glass eyes. The central eye-spot is made up of gold glass. These seem to belong to the third and second centuries B.C. (PLATE I, Fig. 58. Text, Fig. 18 shows a section of an eye.)

Considering the manner of the technique we can add another type or two according to the width of the bore. The earliest eye beads of the type referred by Petrie to the XXII-XXIII Dynasties, appear, if I may judge from his drawings, as well as from specimens from Egypt, to possess a comparatively narrow bore, while those from Italian tombs have a very wide bore, so wide that the beads have been described as rings. The width is due to the beads having been made over a rod, instead of a wire, so that they should not turn around when the eyes were inserted (PLATE I, Figs. 50, 51; Text, Fig. 7). The earlier beads seem to have been built up of ready-made eyes, so that little or nothing of the matrix is visible. But I have also seen beads of this kind, though rarely, from Italian tombs (Text, Fig. 5; PLATE I,



FIGURES 17-19.—TYPES OF EYE BEADS

Figs. 40, 41, and possibly 42, which is made after Petrie's descriptions).

The three last mentioned types, J, K, and L, require more attention. They are certainly all later than the fifth century B.C. I know of few found in Italy. The one I have figured is from the Historical Museum in Berne, Case 24, Zollikofen, Nos. 24012, 10155; others are from Savieza, No. 18931; Rüchingen

¹ Surface view of stratified eye knob, with three dark and four light rings. The eye-spot is of clear transparent glass. The dotted line shows the depth to which the knob has been ground off. First in the XIX Dynasty, later in the fourth to the third century B.C.

² Section of a gold-glass eye. The eye-spot is transparent white glass, the ruled section represents the gold layer, which consists of a thin film reflected through the transparent eye-spot. Third to second century B.C.

³ A modern Arabic Fatma eye, one half natural size. Base matrix pale blue. Central eye-spot black. Inner ring white, opaque; outer ring deep ochra yellow. Arabic.

and Grosshochstetten, Grab 1, No. 23747. In the Historisches Landesmuseum of Zürich there are many others, for instance Case 60, Nos. 15213, 1527. All are dated 'Late Latène,' a rather indifferent chronology, considering the divergent opinions as to the ending of the Latène period, which some place in the last century B.C. while others protract it into the Christian era. Prof. Dr. P. Reinecke, who is the first to make a scientific study of beads,¹ places these two types with projecting triangular corner, and those with the comma-eyes in the "second half of Latène."

The type with the spiral eyes (Text, Fig. 16) is the most interesting to Egyptologists, being, as it were, a resurrection of the comma-eye beads of the XIX Dynasty (PLATE I, Figs. 27, 28). I know of no beads with such ornamentation from the long period between XIX Dynasty and the fourth or the third century B.C. The technique in both sets of beads, the older and the later, is the same,—a spiral or comma, superposed on a differently colored shield by means of stratification. Some of these late comma beads have the same wide bore and lopsided form which characterize the beads of the fifth century B.C. (PLATE I, Figs. 50, 51). The colors are, however, rarely yellow, but more generally deep, dull ultramarine blue base, white, narrow, shield, and deep chrome yellow comma. Yellow base is, however, not unknown, as is shown, for instance, by Figure 231 on Reinecke's chart. The type probably continued into the first century A.D., as would be indicated by a bead in a large and fine necklace in the University Museum of Perugia,—base fine Venetian red, shield white, comma blue. There is, however, much doubt about the nature of the necklace, which seems made up of beads from many periods, and it is not impossible that this red base bead is a companion to the gold glass eye bead of the third century B.C. (PLATE I, Fig. 58). Beads of this fine red base color are rare before the Roman Empire, at least in Italian tombs, but become numerous in the beginning of the imperial period.

Intrusions of Stratified Eye Beads.—Kisa and others contend that stratified eye beads continue to the time of the Lombards, evidently founding their opinion upon stratified beads found in necklaces of that time. Such are, for instance: Rome, Museo Nazionale, Castel Trosino, Necklace K; Nocera Umbra, CXII

¹ P. Reinecke, *Glasperlen vorrömischer Zeiten*, in *Altertümer u. Heid. Vorzeit*, Bd. V, Taf. 14, p. 60. Mainz, 1911.

and CV, both of which contain beads exactly similar to Figures 50, 51, 54 of PLATE I. In the Museo Cristiano in the Vatican Library, in the right-hand case near the door to the octagonal room, is a necklace with enormously large, typical beads of the third or fourth century A.D. from the catacombs. Mixed in are six beads of the fifth century B.C., like Figures 50, 51, 54. Similar intrusions are often found in necklaces excavated north of the Alps and referred to the Alemannic or Lombard period, but I will here call attention only to the remarkable necklaces from Ober-Salton near Charchow, Russia, now in the Stuttgart Historical Museum, dated in the seventh or eighth century A.D. These necklaces are much older, and mostly made up of beads of the third and fourth centuries A.D., together with some stratified eye beads of the fourth or third century B.C. of the same general type as Figure 59, but black and white. It is in fact rare to find a "Merovingian" necklace which does not contain intrusions derived from old Italian tombs, the preferred spoils of the barbaric invaders during the time of the great migrations. The greatest number of intruded beads in these necklaces are not, however, eye beads but the characteristic large, blue melon beads of the first centuries of the Roman Empire. See the Morgan collection of Merovingian antiquities in the Metropolitan Museum, New York, and the Lombard collections from Castel Trosino and Nocera Umbra in the Museo Nazionale in Rome, where many necklaces contain two or more such blue and green melon beads of glass or paste, the latter kinds especially abundant in early Etruscan tombs.

Cut Off Rods; Millefiori (Text, Figs. 3, 4; PLATE I, Figs. 55, 56, 60-64).—The last group or general class of eye beads seems to have originated at some time in the first or second century B.C. The technique has already been described (page 6). There are no data to fix the exact time or the place of the invention, but it seems probable that it took place in the time of the later Ptolemies and in Egypt. The earliest dated bead of this kind which I have seen is one in a necklace in the Alte Akademie in Munich, from Percheling, dated "time of Augustus." It forms the centre of a necklace of 45 gold-glass beads and four glass beads. The bead has a base of blue-gray glass, with a girdle made up of a window pattern of white, green and red minute squares.

Another bead, possibly made by cut off rods, is the one represented by Figure 55. I was not able to examine this bead

microscopically, but the minuteness of the eyes and ring would indicate that it was not made by stratification but by a cut off rod, which, first coarse, had been drawn out to diminish the pattern. If this is correct, the invention of the process can be dated back to the fifth century B.C. Certain it is, however, that the process did not come into general use until much later, a fact rather against the earlier date for its discovery, for when the process was once invented, eye beads could be manufactured with a facility and at a cost lower than before. A thousand eyes could now readily be produced in the same time as a dozen of the stratified kind.¹

To discuss the numerous varieties of mosaic eye beads, would take up a volume or two, and I must confine myself to pointing out the more characteristic periods of these beads.

First Period.—From the early part of the Roman Empire, or from the end or, possibly, middle of the Ptolemaic period, and

¹There is much divergent opinion concerning the time when mosaic glass was discovered, but a study of the collection of glass from the Palace of Amenhotep shows that four of the types date from that period. The following types of mosaic glass can be distinguished. *Fern and feather pattern.* Already perfected in the time of Thothmes III. and has been in use ever since. Its technique consisted in winding bands of glass around a cylinder and then while yet soft dragging or combing them up and down. *Breccia or agglomerated glass.* First found in the Palace of Amenhotep. It is made of varicolored fragments of glass sufficiently fused to form a solid mass. *Stratified mosaic.* Earliest specimen found on a ring from the Palace of Amenhotep. It consists of narrow bands of glass placed side by side or in layers and then rolled to the required thinness. In the Amenhotep specimen the bands are microscopic. The type becomes common in the Ptolemaic period. *Incrusted mosaic* becomes common in the ninth century B.C. It consists of a plain matrix of glass into which fragments of other glass are rolled in. *Onyx glass.* Made to imitate onyx and similar stones. It consists also of thin layers of glass which were rolled thin and then bent to form waves. This type is also found in the Amenhotep collection, but becomes common in the fifth century B.C. *Columnar mosaic.* Dates from the Ptolemaic period. Also called millefiori. Consists of innumerable rods of glass placed on end and then fused together. The mass was then cut transversely in sections. *Lamellated or Lamella glass.* Dates from the end of the Ptolemaic period. The lamellae or flakes of glass were placed horizontally on a flat sheet of glass, then fused and rolled in. *Maculated mosaic glass.* Sections of rods or fragments of glass were dropped into a fused matrix of another color and then stirred or dragged so as to form comet-like blotches and figures. Earliest is from the fifth century B.C. It becomes the most common type in the fourth century A.D. We have beads made of all these types. The *columnar* has furnished material for all the varieties of composite eyes since the type was first invented, with only a single exception, (PLATE I, Fig. 65) in which the ring consists of a twisted coil.

ending before the time of Constantine. Characterized by an abundance of clear glass, bright colors, fine technique, and with varieties with window pattern, scroll pattern, face beads, and mosaic-pattern of distinctly Egyptian type. In this period we also find numerous melon beads of translucent glass, characterized by rounded lobes and usually wide bores.¹

Second Period.—The time of Constantine, not well defined, but including parts of the third and fourth centuries. Few of these beads have been described or grouped together as a whole. The beads are characterized by having eyes made of small disks, placed on the top of the matrix, and rarely rolled in (PLATE I, Fig. 63). The eye-spot is either very minute or very large, nearly always vermilion red, while the disk is pale lemon yellow. Flinders Petrie² is the first to figure such a bead and refer it correctly to the middle of the fourth century B.C.

The Murch collection in the Metropolitan Museum contains many beads of this kind. In some beads the eyes are strongly convex, made of mosaic rods, of millefiori pattern. The colors are fine, deep blue, blue green, light ash-blue, recalling the colors of the XIX–XX Dynasties. Other beads recall the triangular type of the third and fourth centuries B.C., with many eyes, which project by heavy knobs, but now made of cut off rods, instead of stratified glass as in the earlier beads. Other beads have inlaid coils of twisted threads, recalling those of the Rameside time, so that we can characterize this period as a kind of revival of early types. Black glass seems very common, and the technique is always coarse.

Third Period.—It is unknown when this period begins, but we find it well defined in the sixth century A.D. This degraded period of artistic work is characterized by a poor technique, coarse colors of red, yellow, brown, by a scarcity of blue and green, except the bright “arsenic” or emerald green, which, together with certain bright and really fine shades of lemon and deep orange, now appears for the first time. In this period the “links” or crossed wave bands are common. The eyes are often square, and the beads often cubical or three-cornered. There is also a revival of the fern and feather pattern, produced by dragging the superposed spiral rings in one or two directions. Eye beads with knobs are common. Transparent glass is rare.

¹ James Curle, *A Roman Frontiers Post*, London, 1911.

² *Tanis*, Egypt Expl. Fund, London, 1886, Part II, Pl. VII, fig.

These beads are variously known as Merovingian, Lombard, or, in Germany, as "Alamannen." The principal collections, dated by coins of the sixth century A.D., are in the Museo Nazionale, Rome, from Castel Trosino and Nocera Umbra. The collection of J. P. Morgan of Merovingian beads in the Metropolitan Museum contains many and interesting necklaces of this period, which French investigators consider continued into the seventh and eighth centuries A.D.¹

Later Mediaeval Types.—The material wherewith to judge the Carolingian beads and those of the period immediately preceding the Venetians, is either too scanty or too badly described to permit of discussion. We are told by several French investigators that "the Carolingian beads are similar to those of the Merovingians but very much larger." This statement is quoted in all text-books which mention beads of this period and does not advance our knowledge sufficiently to characterize the period. Lately Joseph Hampel (*Altertümer des frühen Mittelalters in Ungarn*, Braunschweig, 1906) has described and figured an immense number of mediaeval beads from the earliest time to, and including, the twelfth century A.D. Unfortunately the descriptions are not sufficiently detailed, and the figures are so much reduced and so crudely drawn in line, that our information is not greatly benefited by the great labor of the author. They show, however, that down to the twelfth century A.D. the millefiori process was in use to produce eye beads, and that these collections contain material of inestimable value for future study.

After the return of Marco Polo from the Orient, Venetian factories began to supply beads for export to uncivilized nations, employing principally the millefiori process in producing eyes. Unfortunately these early Venetian beads have never been the subject of study. Our only acquaintance with these beads is derived from examples found in tombs in Africa, America, etc. It seems to be generally presumed that the Venetians imitated the antique beads and that they do so to this day, partly in order to palm them off as veritable antiques. So far, however, I have failed to find a single Venetian bead which resembles an antique type sufficiently to be mistaken for one.

In the present day the Arab glass-workers in Hebron and other places produce large beads with ringed eyes, which are known

¹ Cl. Boulanger, *Le Mobilier Funéraire Gallo-Romain et Franc en Picardie et en Artois*. Paris, 1902-05.

as "Fatma" eyes. This amulet is flat, circular, about one inch across, in the centre being a circular, black, red, yellow or blue eye, surrounded by one or two broad rings of other colors. In the Vatican Museum of Egyptian antiquities are several of these beads or amulets, strung together with Fatma hands of glass, placed among antique Egyptian beads. Many Egyptian collections contain such modern intrusions, variously labeled Egyptian, Greek, or Etruscan (Text, Fig. 19).

Manner of Recognizing the Types.—The following hints may aid the student to recognize the three main types.

Impressed Rings.—The inlaid rings in these beads rarely adhere well to the matrix of the bead, and many beads are found with only concave ringlets, the impressed ring having fallen out. When the eye-spot is of the same color and quality of glass as the matrix, we can suspect that the eye has been produced by this process. The handsome and interesting eyes and bands of the Italian whorls of the ninth to the fifth century B.C. were always produced in this way.

Stratified Eyes.—Examined with a strong magnifier we find that the transparent or semitransparent eye-spot is lighter at the edges than in the centre, which is due to the fact that the spot is more or less lentoid with thick centre and thin edge. The rings are generally very irregular, but the outlines always soft and frequently wavy (Text, Figs. 2, 6, 5). When some eyes on a bead have a different number of rings from other eyes on the same bead, we can suspect that the eyes are stratified. If produced from cut off rods the probability is that all eyes of the same color came from the same rod, thus possessing the same number of rings. The central eye-spot is sometimes fallen, leaving the layer below uniform. Eye-spots differ generally from the bead matrix.

Cut Off Rods.—The eye-spot extends all through the eye from top to bottom, and is equally thick in the centre and at the margins. These eyes are often seen to possess a perspective depth, like a rod immersed in water. An eye consisting of an irregular fragment nearly always belongs to this class. The color is thus uniform throughout. Elevated knobs are not likely to be surrounded by rings, except near the apex. Eye-knobs with several rings down the sides are almost certainly produced by stratification (Text, Fig. 17).

GUSTAVUS EISEN.

EXPLANATION OF PLATE I

Figures

- 1-4. Glazed paste beads with ringed eyes, produced by painting impressed rings and dots. XVIII Dynasty. Egypt.
5. Glass bead from the author's collection, of a type similar to that described by Petrie as found with scarab of Thothmes III. Also in Lisht; also found in the Murch collection.
- 6-8. Similar types but differently colored. XIX Dynasty. Lisht. Metropolitan Museum, New York.
9. Glass, leaves produced by raking, simple eye. Lisht. Metropolitan Museum. XIX Dynasty.
- 10, 11. Glass, simple eyes. Lisht. XIX Dynasty. Metropolitan Museum.
- 12-26. Eye beads of glass with eye-rings, produced by stratification. From Lisht and Thebes. XIX Dynasty. Metropolitan Museum.
- 27, 28. Glass. Earliest eye beads of glass with comma-eye. XIX Dynasty. Lisht. Metropolitan Museum.
- 29-32. Earliest eye beads of glass with impressed coils, of the same type as the bead described by Petrie in *Illahun*, pl. XVIII, fig. 30, as of the time of Rameses II. Murch collection, Thebes (?). Metropolitan Museum.
- 33, 34. Glass beads with impressed coils and ringed eyes made by stratification. XIX Dynasty. Murch collection. Metropolitan Museum.
- 35-39. Glass pendants and beads which we are now able to fix as from the XIX Dynasty, generally described as from the "New Empire" or XVII-XX Dynasties. 36, author's collection. 37, 39, Lisht. 35, Murch collection. 38, Murch collection, $\frac{1}{2}$ diameter of original.
- 40, 41. Earliest type of eye bead composed entirely of stratified blocks. Author's collection. Slightly enlarged. XXII to XXIII Dynasties. Thebes.
42. Earliest eye bead with quadruple eyes, according to Petrie (*Hyksos*, fig. I). XXIII Dynasty, from 766 B.C.
43. Earliest glass bead with stratified eyes found in Italy. Tomba della Straniera, Archaeological Museum, Florence. From Vetulonia. Sala I, vetrina III, Nos. 6156-6171. Undoubtedly Egyptian. Ninth to eighth century B.C.
44. Eyes made by stratification. Egypt. Author's collection. Ninth to eighth century B.C.
- 45-47. Earliest simple eye beads, made by impressed rings, found in Italy. A very common type, called by the Italian authors "color turchino con anelli." Generally poorly made. Probably Phoenician. Eighth to fifth century B.C. Most common in the eighth century, especially at Veii. Generally found in necklaces together with

- very clear transparent white glass beads and with amber. Leprignano, Museo Etrusco, Rome. Eighth century B.C.
48. The finest type of stratified eye bead from Etruscan tombs of the eighth century B.C. Glass ultramarine blue, eye-rings chrome yellow. From Agro Falisco, Museo Etrusco, Rome. No. XXVIII—Central case in the second room.
 49. Glass, flat, four cornered bead, a common type in Etruscan tombs of the eighth century B.C. This bead is seen from the side. Stratified. From Falerii, Museo Etrusco, Rome. XLIV—4465, 4019. The bore is generally small, the size of the eye-knob. Color, blue-green. Seen from the top the bead is almost square, with four eyes. A similar bead is figured on Pt. XXXI of *Album Musée Cant. Vaudois*, Lausanne, 1896, and marked "Bronze Age." Probably considered very precious as there is never more than one in a necklace.
 - 50, 51. The most characteristic type of stratified eye beads of the fifth century B.C. in Italian tombs, but also found in Syria and Egypt, Cyprus, etc. The Cesnola collection in the Metropolitan Museum contains a large necklace. Earliest is a single bead from Falerii, Museo Etrusco, Rome, No. XXII; eighth century B.C.; possibly an intrusion. The latest are from the fourth century B.C., in the Arndt collection in the Glyptothek, Munich, Case N, and in the excavations of the "Kabirentempel" at Thebes, Greece, which cannot be earlier than 390 B.C. Munich.
 - 52, 53. Similar type to the last. No. 52 with knobs, isolated eyes. No. 53 with approached eyes. Compare No. 42. Stratified. Fifth century B.C. No. 52 from Padua, Tomba della palazina, Museo Etnografico, Rome, Sala XXXVI, No. 56653. No. 53 is the commonest form in Etruscan tombs. Museo Etrusco, Rome, Palestrina, Barberini collection. Fifth century B.C.
 54. Glass, stratified eyes, ultramarine blue base. Common in Italian tombs of the fifth century B.C. Museo Etrusco, Rome, Corchiano, XVII.
 55. Earliest eyes from cut off rods. Fifth century B.C. Museo Nazionale, Ancona, Sala H, Case 48; marked "primo età del ferro."
 56. A similar type to 55. From the Barberini collection from Palestrina. Museo Etrusco, Rome. Mixed stratified eyes and cut off rods. Fifth century B.C.
 57. Glass, stratified eyes. Seen from top; from Priene; private collection of Professor Dr. Paul Wolters, Munich. Earliest possible date 325 B.C. or fourth century B.C.

58. Glass, stratified eyes, with centres of gold-glass. Giorgio Sangiorgio collection. Rome. Third century B.C.
59. Typical glass bead of the third century B.C. Historical Museum, Berne; from Zollikofen, 24012. Stratified eyes. Some eyes with comma centres.
- 60-62. Glass, time of Augustus. Eyes by cut off rods.
63. Fourth century A.D. superposed disks, of cut off rods. Thebes. Author's collection.
64. Characteristic eye bead, sixth century A.D. Museo Nazionale, Rome; Nocera Umbra, CXL.
65. A Venetian intrusion; in an Etruscan necklace of the fifth century B.C.; Museo Etrusco, Rome; from Corchiano, XIV, 6036-6055, 6044. Third bead, left of centre. Eye-ring made of twisted threads of glass, overlapping on the matrix. Similar to an Ashanti bead in the Linden Museum, Stuttgart.

MIDDLE ITALIAN SIGNETS OF APPROXIMATELY
350 TO 50 B.C.

THERE is a very considerable family of ancient intaglio ring-stones of Italian provenance, which I have become convinced should be classified under the above heading. Hitherto, following Furtwängler's classification, they have been placed with the "Early Roman Gems under Hellenistic Influence," and in my own book on *Engraved Gems* I followed this attribution as being the only one with respectable authority behind it or, in fact, with any authority at all. Since then, access to a number of the gems in question and observation of their peculiarities have led me to a closer study and to a change of view.

The first consideration that attracted my notice was the large number of these highly characteristic stones compared with the rest of the so-termed Hellenistic-Roman; then, their distinctiveness and uniformity in style, material, and subjects, which seemed to argue a special origin.

They are all broad ovals—some almost circular—convex and with flat backs. This convexity of the picture surface, I cannot but think, led, superficially enough, to be sure, to Furtwängler's classification. Then—and here we find a divergence from Hellenistic work—they are all done practically entirely with the round drill, as were the Etruscan scarabs of the latest type. The design is brought out merely by a number of saucer-like depressions of varying sizes running into each other or joined by broad lines which are also sometimes used independently. Added to these features are other and very significant elements of uniformity. The material is, with hardly an exception, poor and cheap. Of eighteen examples now before me, thirteen are chalcedonies running from white to brownish, and only one or two are of good quality. Three are carnelians, two of them very dull and opaque, and two are quite ordinary brown sards.

Both the character of the work and the material would seem to indicate that we have here the signets of poor people with a rudimentary art sense; but are they the poorer people of rich

communities, like Tarquinii, Capua, Neapolis, or Rome? If so, should we not look to find, as we do elsewhere, cheap imitations of the styles fashionable among their rich neighbors, instead of something so distinct, characteristic, and simple that every example might well be the product of the same hand?

And now to consider the subjects. Here also we note a consistent uniformity. The Etruscan drill-work scarabs, whose workmanship is similar, pictured generally human figures. These gems show almost exclusively animals; another feature which, considered superficially, may have helped toward the old classification. Of the eighteen examples mentioned, fourteen are familiar birds or beasts, many of them shown in connection with some other object, such as a bird perched on a bud, a gable, a plough, or a bucranium, a goat standing on the prow of a ship, or a dog carrying a strigil and an aryballus. The other four show a



FIGURE 1.—MIDDLE ITALIAN SIGNETS

plough, a club with two doubtful objects crossed behind it, perhaps ox-goads, a Pegasus, and the forefronts of a goat and a dog (?) joined at the middle.

Where now shall we find people whose demands and capabilities would be apt to call into being so distinct a class of signets? Furtwängler speculates very suggestively, though not in this connection.

Speaking of the drill-work scarabs he notes that the religious scenes on them point to an Italian rather than to an Etruscan theology; that they are found all over Italy, which he admits does not mean much in view of the widening traffic, and that their dates are contemporaneous with the supremacy of the Samnites who, he hazards, were surely their spreaders and perhaps in part their makers. As to the scarabs, this reasoning

may be sound, but how much more forcibly does it apply to the gems I am considering!

My own comments on the subject were, I fear, rather in the nature of gropings. I, also, was in doubt whether the drill-work scarabs were made by Etruscans, to a large extent for export, and the subjects modified accordingly, or whether the middle Italians had absorbed some Etruscan ideas and learned the craft from that much more advanced race. Then I seem to have had a glimmering of perception that might well have led further. I wrote:

"As a suggestion, it seems, at first glance, rather surprising that, with the long lines of finished gem-engraving among the Greeks of the South and the Etruscans of the North, the middle districts should have remained in a state of barbaric unproductiveness, but, on the other hand, we know that the races of these districts were, for the most part, rural folk, and they may have found it more convenient to buy the few gems they needed. It is, generally speaking, rather later that we find the characteristic Roman work, which, I may add, can be explained by the fact that the earliest signet devices of the Romans were cut in the metal of their rings."

I ought to have carried my reasoning a bit further and I trust I should have done so had I then seen as many of these stones as I now have. The Samnites, Aequians, Sabines, Marsi, Frentani, Picentes, and the rest were, indeed, largely rural peoples, far ruder and poorer than their neighbors of the North and South or even than those of the growing republic on the west coast. Likely enough some of the richer among them imported their signets—perhaps drill-work scarabs—but, doubtless, many men of more moderate means had need of such conveniences. Here, then, we find a hitherto vacant area into which these hitherto unsatisfactorily attributed gems fit with marvellous aptness.

The scarab at its worst meant considerable skill and cost in the shaping of the beetle. The convex forms of the South Italian ring-stones, as they had developed from the scarab and the scaraboid, were much simpler and more inexpensive, and the uniformly poor material is precisely suited to poorer folk. The workmanship, aptly enough, imitated the crudest, cheapest, and most easily copied style with which these peoples were familiar, that of the drill-work scarabs. Above all, the general choice of

animal subjects—a distinct divergence from Etruscan taste and only moderately in evidence among the southern Greeks or the Romans themselves—would seem to show clearly the preference of rural races. It is in the selection of signet subjects, whether they be imitative or original, that we find the truest guide to popular taste. That of simple, rural tribes would be apt to be original and characteristic, and they seem to be so most markedly in the case before us.

Altogether, this attribution of a class of gems as distinct in substance, form, workmanship, and subjects as any that exists seems to me in every way satisfactory and convincing. I have included a few illustrations, that the type may be noted. Once seen, it is unmistakable.

DUFFIELD OSBORNE.

NEW YORK.

STUDIES IN THE HISTORY AND TOPOGRAPHY OF
LOCRIS. I

DURING the months of July and August, 1914, I travelled on foot through the whole length of East and of West Locris, visiting by means of side excursions almost every known site of ancient habitation in that region, making topographical notes, and taking a number of photographs. Some of the inscriptions which I found in the course of these travels have already appeared in this JOURNAL (Vol. XIX, pp. 320 ff.). The present contributions upon moot points in the topography and history of Locris, East and West, based in the main upon my own observations, can be most conveniently arranged under the rubrics of the different localities, using the ancient name, if that be certainly ascertained, if not, the modern designation. The order is in general that in which I visited the localities in question.

LARYMNA

As to the location of Larymna proper there can be no question. The authoritative Greek sources are explicit enough,¹ and the modern name of the region (ἡ τοῖς Λάρυμναις) is conclusive. But whether there were two towns by this name, and, if so, what the relation of the second, or Upper Larymna, was to Lower Larymna, are difficult questions upon which no substantial agreement has been reached.² The solitary passage which expressly mentions

¹ Pliny (*N. H.*, IV, 27), to be sure, puts it in the northwestern portion of East Locris, beyond Daphnus. In his account Larymna (or as he calls it, "Larumna") properly should come in right after the clause "Locri . . . per quos amnis Cephisus defertur in mare" (obviously from the same source as Strabo's ἐντεῖθεν δ' ἡδὴ ὁ Κηφισὸς ἐκδίδωσιν ἐπὶ τὴν θάλατταν [IX, 2, 18, p. 407]). But Pliny's geography of Greece is full of errors. For the date of his sources on Locris see below. Mela, II, 45, puts "Larumnae" between Anthedon and Aulis; but this is merely characteristic of his wretched compilation. Compare also note 2, p. 60, below.

² A detailed account of the earlier literature is given by De la Porte du Teil, *Eclairciss.* 15 on this passage of Strabo, in the Du Teil, Koraes, Gosselin, Letronne, *Géographie du Strabon*, II, 1805 ff. The discussion is carried further

Upper Larymna is in Strabo, IX, 2, 18, p. 406: εἶτα ἐξέρρηξεν (sc. ὁ Κηφισσός) εἰς τὴν ἐπιφάνειαν κατὰ Λάρυμναν τῆς Λοκρίδος τὴν ἄνω· καὶ γὰρ ἑτέρα ἐστίν, ἧς <ἐμνήσθη>μεν, <ἡ> Βοιωτικῇ, ἐπὶ τῇ θαλάττῃ, ἣ προσέθεσαν Ῥωμαῖοι τὴν ἄνω. The text here is sound, the meaning clear: there was a Λάρυμνα ἡ ἄνω belonging to Locris, a Λάρυμνα ἡ ἐπὶ θαλάττῃ (or ἡ κάτω) belonging to Boeotia. It is of no use to object as Mannert¹ and Groskurd² do, that no other author, not even Strabo himself, though he speaks of Larymna elsewhere,³ mentions this upper town; no one else had the slightest occasion to do so, with the possible exception of Pausanias,⁴ and his silence may be very well explained. Either the place had wholly disappeared by his time,⁵ or else Pausanias never visited Larymna at all, which is much more likely, and merely abbreviated some other account.⁶

The real difficulty is geographical. If we look for Upper Larymna in the valley of the *Revma*, the so-called Cephissus,⁷

by C. G. Groskurd, *Strabons Erdbeschreibung*, II, 1831, *ad loc.* All these purely philological disputations, before the era of travel and archaeology, have very little value now.

¹ *Geographie der Griechen und Römer*, VIII. Teil, Leipzig 1822, p. 220.

² *Op. cit.*, *ad loc.*

³ IX, 2, 13, p. 405: εἰσι μέντοι ἔτι προΐοντι μικρὸν πολίχναι δύο τῶν Βοιωτῶν, Λάρυμνά τε, παρ' ἣν ὁ Κηφισσὸς ἐκδίδωσι. Even in the passage (IX, 4, pp. 425 f.) where Strabo mentions other Locrian towns, but not Larymna, as Groskurd objects, he is really describing Locris and its towns as they were constituted in his own day. Upper Larymna may very well have ceased to exist, or at least to be noteworthy, by his time (see below).

⁴ IX, 23, 4.

⁵ So W. N. Ulrichs, *Reisen und Forschungen in Griechenland*, Bremen 1840, I, p. 230; C. Bursian, *Geographie von Griechenland*, Leipzig 1882, I, p. 193, 2; Hitzig and Blümner, *ad. loc.*; Girard, *De Locris Opuntiis*, Paris 1881, p. 35.

⁶ W. M. Leake, *Travels in Northern Greece*, London 1835, II, pp. 290 f., had given good reasons for doubting if Pausanias could have written as he did, had he actually made the journey from Acraephium to Larymna; and R. Heberdey, *Reisen des Pausanias in Griechenland*, Wien 1894, p. 102 and note 84, very plausibly ascribes the whole passage in Pausanias to a Periplus (on the use of which by Pausanias, cf. Kalkmann, *Pausanias der Perieget*, pp. 175 ff.). A. de Ridder even doubts whether Pausanias ever made the trip that he describes from Acraephium to Copae, which was supposed to include this trip to Larymna (*B.C.H.* XVIII, 1894, pp. 271, 2; 451), and I believe he is right. (See hereafter upon Cyrtone and Corsea.)

⁷ On the proper relations of the Cephissus and the Melas to lake Copais, and their respective outlets, see A. Philippson, *Zeitschr. d. Ges. für Erdkunde zu Berlin*, XXIX, 1894, pp. 40 ff. Erroneous views of the ancients are there discussed.

above the lower town, then it is incredible that the harbor town should have been Boeotian at a time when the upper town was Locrian. Larymna as a harbor had practically no Locrian country as *hinterland*, as Ulrichs (*op. cit.*, p. 230) pertinently observes, and if Upper Larymna lay in Locrian hands, the port simply could not have been utilized by the Boeotians at all. And again, at a time when Boeotia was strong enough to seize and hold an ancient Locrian city, how could the Locrians have maintained themselves in a position which effectively blocked off the harbor from the Boeotian interior? Or, if the Boeotians controlled the route which ran from Lower Larymna by the modern sites Martino and Monachou to Copae, how could an insignificant Locrian enclave¹ have maintained itself, surrounded by Boeotians? That Upper Larymna might for a time have been Boeotian, while Lower Larymna was still Locrian, would be natural enough,² as Boeotia gradually encroached upon ancient Locris, but the converse is historically and topographically unthinkable. Two suggestions have been made to avoid this difficulty. Leake³ thought that the modern Larmais (the district), or Kastri (the town), was the Locrian, or Upper Larymna, and that the Boeotian or Lower Larymna was to be sought for on the bay of Skroponeri. This is inadmissible for several reasons, even if one, with Leake, regard Strabo as having blundered badly. First, no remains have ever been found of any ancient town of any appreciable size on the bay of Skroponeri, nor from the character of the surrounding country is it likely that a seaport town ever existed there; yet the Boeotian Larymna was an important place. Second, as Leake himself admits,

¹ The foundations and lower courses of the walls of Upper Larymna (Bazaraki) are of less than ordinary strength, and the workmanship is inferior. As a natural stronghold, its situation was admirable; on a mountain spur, with a ravine on one side, gentler slopes on two other sides, and a depression on the east towards the mountain, and with powerful and perennial springs of water just outside the walls and dominated from them. But its fortifications could never have stood comparison with those of Lower Larymna, and it was clearly not intended for a fortress.

² In Ulrichs' time, of the three mills in the gorge, the uppermost belonged to the monastery of Palagia on Mt. Ptoon in Boeotia, the two lower to Martino, *op. cit.*, p. 227. Compare also K. G. Fiedler: *Reise*, etc., Leipzig 1840, I, p. 110. Pape-Benseler, *s.v.* Λάρυμνα, make the upper town Boeotian and the lower Locrian, flatly against the testimony of Strabo, and this is not the only palpable blunder in the article, which must have been cast together hurriedly.

³ *Op. cit.*, pp. 290 f.

Upper Larymna soon disappeared, yet his "Upper Larymna" is the most considerable mass of ancient remains in all that part of Greece, while his "Lower Larymna" cannot be discovered at all.¹ Third, there is no conceivable reason why one Larymna should be called "Upper" and the other "Lower," if they were both on the seacoast, at exactly the same level, not even in the same valley, but separated from one another by a considerable mountain, and belonging to different tribes. Fourth, if anything at all is clear from Strabo, it is that Upper Larymna and the Anchoe were very close together, while the Anchoe (now Kephalaria) is fully three miles from Lower Larymna.²

H. Kiepert in the *Formae Orbis Antiqui*, XV (1894), identified Upper Larymna with the small ancient settlement near Martino.³ This satisfies the requirement of the expression ἡ ἄνω, for it so happens that the two streams enter the gulf of Larymna at almost equal distances from the town, the so-called Cephissus to the south, and the other, a rather sizable torrent, to the north. Also it is quite conceivable that Lower Larymna might have been Boeotian while the village at Martino was Locrian, for, though Lower Larymna is the natural outlet for Martino (the whole region belonged to Martino, and was cultivated thence when Ulrichs passed through),⁴ there is no difficulty in reaching the sea from this point by the route leading through Cheliadou and Proskyna. There are, however, very serious difficulties involved in Kiepert's conjecture. First, if you can accept anything about Strabo's account, it is that Upper Larymna was near the Anchoe and the outlet of the so-called Cephissus. Second, considerable remains of a town at just this site are actually in existence, and there is no other recorded town name which can, with any degree of plausibility, be assigned to them. Third, though Martino is actually in a valley that is literally "above" Larymna, nevertheless the Larymna valley could only have been that of the so-called Cephissus, its abundant flow of water driving the mills

¹ The only ruins on this bay are probably those of Phocae (Ptol., 3, 15, 9).

² Frazer, *Pausanias*, London, V (1898), pp. 106, 108. This agrees with my own pedometer record (July 7).

³ It is due only to very imperfect geographical data that K. O. Müller, *Orchomenos* (ed. Schneidewin), in his two maps does the same thing. His locating Upper Larymna by the Anchoe is of course correct, and had he known that Martino lay on a quite different water course, he would certainly not have confused the two.

⁴ *Op. cit.*, p. 227.

and irrigating the gardens and orchards of the town,¹ while this valley alone connected the harbor with the large and important towns of the interior for which it served as the most convenient outlet.²

We are forced, therefore, to the conclusion that the ruins at the gorge above the springs in the Revma at Bazaraki are Upper Larymna. Some final confirmation of this view may be seen in the modern designation, Apano-Larma, as an alternative to Bazaraki, while the region below the narrows is called Kato-Larma (Ulrichs, *op. cit.*, p. 227). That there really was such a place as Upper Larymna the discovery of ruins precisely where Strabo locates it is conclusive evidence. They answer once and for all the hypercriticism of Mannert and Groskurd (*loc. cit.*), that Strabo had created a second Larymna in a vain attempt to reconcile sources which spoke now of a Locrian and again of a Boeotian town by that name. We may further note that the existence of two separate towns called Larymna has left its impress also in the distorted farrago of Pliny. In *N. H.*, IV, 27 (see p. 32, n. 1), mention is made of a Locrian *Larumna*; but in 26 the MSS. give: "Glissa, Copae, iuxta Cephisum amnem Lamiae et Anichiae," etc. Now it makes no difference whether we preserve the barbarous corruptions "Lamiae" and "Anichiae" (which Pliny may very possibly have actually written) with the most recent scholars (Detlefsen and Mayhoff), or emend

¹ Kambanis (*B.C.H.* XVII, 1893, p. 324) is certainly wrong in saying that the springs right at Bazaraki are the outflowing of water from the katavothras. The quantity of their flow has no relation to the level of the Copaic lake, as the natives long ago asserted (Ulrichs, *op. cit.*, p. 227) and as has been proved by the fact that the complete drainage of the lake has not affected these springs in the slightest, which flow now as copiously as ever. (Cf. also Frazer, *op. cit.*, p. 107.) Philippson (*op. cit.*, p. 50) speaks as though all the springs in the Larymna valley were fed from katavothras 4-7 of his list. But since the draining of the lake all these katavothras are dry, while the lower springs run as formerly. If they are connected with any katavothras of lake Copais, it must be Philippson's 1 and 2, near the former island Stroviki, for into these a branch of the never failing Melas has constantly flowed, or else they are connected with the swampy region about the head springs of the Melas.—On "katavothra" as the correct form of the singular (not katabothron, or katavothron as it is frequently given, *e. g.*, by the *International* and the *New Standard*) one might compare Kyriakides, *Modern Greek-English Dictionary*, s. v. *Καταβόθρα*, and Philippson, *op. cit.*, p. 45, 2.

² Richard Kiepert in the *Formae Orbis Antiqui*, XIV (1906), and the accompanying text, p. 2, very properly places Upper Larymna at Bazaraki, in accord with most geographers.

with Barbarus and Harduin to "Larymna" and "Anchoa," there can be no question that these last mentioned places are meant.¹ Regarding Larymna (of course Anchoe was not a city) Pliny was, unwittingly enough, no doubt, in essence correct.²

The statement of Strabo, however, that Upper Larymna was Locrian at a time when Lower Larymna was Boeotian, we have seen cannot be accepted. Can it be explained as anything but a gross error? I think it can. But first we must refute a well meant but unsuccessful attempt to explain away the difficulty. Ulrichs (*op. cit.*, p. 230) conjectured that the older Larymna was near the Anchoe and that its ἐπίγειον later grew to such importance (but only after the Boeotian occupation) that the older Locrian settlement was first overshadowed, and later wholly absorbed. This view has been accepted by Bursian (*loc. cit.*), and Wm. Smith (*Dictionary of Greek and Roman Geography*, s.v. *Larymna*), but there are fatal objections to it. In the first place there is nothing at all ancient about the ruins of Upper Larymna. The city walls are all of squared stone, sometimes only roughly hewn, but as such only evidence of careless work, not of antiquity.³ The only suggestion of polygonal work is in some interior terrace walls (so also Lolling) and these are unquestionably late. The pottery fragments which are plentiful are all relatively late, and the only known inscription from the site (published in this JOURNAL, 1915, pp. 320 f.) belongs to Roman times. Precisely the opposite is the case at Lower Larymna. Here notable remains of a rough polygonal city wall of an ancient order exist, especially to the northeast beside the little harbor, where a stretch of nearly 100 metres still stands at some places as much as 2.5 m. in height, and averaging about 4.5 m. in thickness.⁴ Frazer (*loc. cit.*, p. 108) noticed this wall, but felt uncertain as to its date. He was

¹ Groskurd, *loc. cit.*; Hirschfeld, Pauly-Wiss., I, 2111, 10 f.

² It is singular that neither *Anchoa* nor *Anichiae* appears in the *Thesaurus*. Perin's new *Onomasticon* does better, although it cites only *Anchoa* and refers merely to Leake's antiquated discussion.

³ This I can assert from a careful examination of them myself. So also Lolling in Baedeker⁴, p. 186 (Engl. Ed.), and Hitzig-Blümner (*loc. cit.*); cf. also Frazer, *op. cit.*, p. 110.

⁴ Noack, *loc. cit.*, p. 450. Ulrichs, *op. cit.*, p. 231, had noted the existence of this large polygonal wall and assigned it quite properly to an earlier epoch than the other fortifications. Precisely the same condition exists at the neighboring and closely related Halae. There the excavators, Miss Walker and Miss Goldman, found very considerable remains of a polygonal wall, dating from the sixth century or earlier. See this JOURNAL, 1915, pp. 432 ff.

inclined to ascribe both it and a semicircular tower inside a rectangular one on the northeast of the town "to a later repair." This view is quite inadmissible. At what period of "later repair," that is, long after the fine ashlar masonry of the fourth (or possibly fifth or third) century, did men erect massive walls of rough-hewn cyclopean masonry more than 4 m. in thickness, and that too at a point where there was the very least chance or likelihood of the older walls being injured, *i.e.*, on the inner or protected side of the small harbor, and where there is no indication that walls of ashlar masonry ever existed? Furthermore such later repairers were not particular about materials used, yet the singular feature of these polygonal walls is that they



FIGURE 1.—LARYMNA. CYCLOPEAN WALL BY THE INNER HARBOR

are uniformly constructed of white limestone, while the ashlar masonry walls are of a markedly red stone, as Mr. Frazer himself noticed; why should the repairers have gone to the trouble of working new quarries and have utterly rejected any fragments even of the hypothetically older walls which they were supposed to be repairing? On the other hand, the builders of the ashlar masonry walls were compelled to use for the most part freshly quarried stone, as few of the white limestone blocks, if properly squared, would have been large enough for their purposes, yet they did use them occasionally, as here and there a white stone appears in the red. As for the tower southeast of the mole, of "fine ashlar masonry," which Mr. Frazer supposes to have "been

replaced by a semi-circular tower of polygonal masonry built of small stones with gaping joints," I should suggest that precisely the opposite of Mr. Frazer's suggestion is the case. The earlier, rather rude polygonal tower of uniformly white limestone, has been encased in a rectangular tower of ashlar masonry. When the new walls were erected the builders, finding this tower in a fair state of preservation, although not strong enough for their purposes, simply used it as a support for the casing of rectangular blocks in the new square tower. In this way it was preserved



FIGURE 2.—LARYMNA. TOWER ON THE NORTHEAST BY THE OUTER HARBOR

when the much better laid wall finally succumbed to the elements. How otherwise, one may well ask, could a loosely built wall of this sort have survived say fifteen centuries or more, when a much more powerfully built wall, according to Mr. Frazer's theory, fell into decay in a fraction of that time? Finally, if the loosely built wall were a repair, how are we to account for the singular action of the builders who carefully eschewed the fine squared blocks of red limestone lying all about them, as they still are today, and went to the trouble of bringing in smaller and only roughly fashioned stones of a different quarry for a more

difficult piece of construction? The illustrations (Figs. 1 and 2) of the two portions of the wall, which are from my own photographs, will, perhaps, make my argument clearer. They will also show that the semicircular tower belongs probably to a little later period than the long stretch of cyclopean wall beside the little harbor.

All this discussion has the most important bearing on the history of Larymna. These rough polygonal walls prove conclusively that Larymna was a strongly fortified, and hence important, seaport in very early, probably Mycenaean times.¹ Obviously

¹ Another evidence of early settlement is the proto-Corinthian pottery found at Larymna. Cf. Noack, *loc. cit.* A. de Ridder in an exceedingly captious criticism of Noack's work (*B.C.H.* XVIII, 1894, pp. 446 ff., esp. p. 451) denies that the Minyan civilization had any contact with the sea; he asserts that the Minyans were utterly engrossed in agriculture, and thinks that the fortifications on the hills between the Copaic lake and the coast were intended to protect the plain from the sea. So far as I know typical "Mycenaean" pottery has not been found either at Anthedon or at Larymna, but no excavations have been carried on at either place, and the oldest fortifications at both sites are very likely from the later Mycenaean period. Particularly the fortification of such low lying sites rather than rocky hill tops is characteristic of Minoan or Mycenaean civilization in contrast with archaic Greek (cf. Noack, *op. cit.*, p. 439). As for de Ridder's notion regarding the hill forts, one might observe that pirates never could have penetrated as far inland as Orchomenus, nor, if they did, would such hill forts have been any real hindrance to them, as the low mountains are everywhere traversable for such men. The only good reason for their construction would be to afford safety to commercial highways from the occasional depredations of mountain brigands. But the less said about this fantastic notion, perhaps, the better, since even Wilamowitz has admitted (on new inscriptional evidence) that Orchomenus as a member of the Calaurian Amphictiony was a sea power in control of the Northern Boeotian coast, Anthedon, and, we must add, Larymna, through the seventh, and probably well into the sixth century B.C. See his 'Die Amphiktionie von Kalaurea,' *Nachr. der. Gött. Ges. d. Wiss.*, 1896, pp. 158 ff., esp. 167. His results are completely accepted by Ed. Meyer, *Hellenika*, p. 101, 2, and Beloch, *Gr. Gesch.*², I, pp. 208 f., 330. Beloch (p. 209) calls the trade route with the sea the "Lebensnerv" of Orchomenus.—It is strange that in noting the control which Orchomenus must have had over a harbor, Wilamowitz thought only of Anthedon, quite neglecting the much better, and more naturally connected harbor, Larymna (at the mouth of the so-called Cephissus), with the shorter haul, and the far more favorable terrain, and hence better roadway. Of course, if one were prepared to accept the view of A. Boeckh (*Abh. d. Berl. Akad.* 1836, pp. 41 ff. = *Kl. Schr.*, I, pp. 1 ff.) and E. Curtius (*Sitzungsber. d. Berl. Akad.* 1842, pp. 1181 ff.) that the Minyans, akin to the Tyrrhenians, came by sea to Boeotia (which, in view of the increasing favor with which the overseas origin of the Etruscans is now regarded, is not at all impossible), the question were completely settled. Larymna would then have been just a station in

not for the Locrians, but only for the "Minyans" of Orchomenus and the region of the Copaic Lake. A glance at the map shows that Larymna is the only convenient outlet to the sea, and to these seafaring Minyans of Orchomenus the earliest occupation of Lower Larymna as a harbor must be ascribed. All this is obvious, and attention has been called to it more than once,¹ but as Leake, Ulrichs, Smith, Bursian, Frazer, de Ridder, and others have disregarded it, I shall try to add some further evidence, and to point out the bearing of these facts upon the history of this special region and of the Locrians in general.

The great engineering works for draining the Copaic Lake must have compelled the Minyans to ensure a safe outlet for the large part of the waters of the lake which escaped by way of the Larymna valley, for the dangers of any stopping up of the exits were so great and the effect so immediate (compare the Theban Hercules legend), that it was a vital matter to control all outlets which might be interfered with.² This cause alone would have made the Minyans control the Larymna valley, even were a haven not necessary.

Again, between Upper Larymna and the sea an ancient road, some distance above the present way, passes for some 300 m. over an outcrop of very hard limestone, in which the fissures have been filled up with small stones. The great antiquity of this road and its very considerable use are shown by the extremely deep ruts (measuring 1.55 m. from centre to centre), which can be traced for the greater part of this distance. At some places, despite the weathering of nearly two thousand years, they are

their advance to the interior, and must always have been held in order to maintain relations with their original element and connections. It is better, however, not to use this theory for argument until more objective evidence can be adduced in support of it. Nevertheless Curtius (*op. cit.*, p. 188) is quite right in insisting that the Minyans are everywhere and constantly regarded as a folk of seafarers. See also Philippson, *op. cit.*, pp. 54 ff., on the Minyans, their origin and relation to Thebes and the seacoast.

¹ As e.g. by K. O. Müller, *op. cit.*, p. 207; H. Kiepert, *Lehrb. d. alten Geographie*, Berlin, 1878, pp. 285, 289; Lolling, *Hellen. Landeskunde* (Müller's *Hdbch.*), p. 133; Baedeker⁴ (Engl. ed.), pp. 186, 190; E. Meyer, *Gesch. d. Alt.*, II, p. 193; and Noack, *loc. cit.*

² Cf. M. L. Kambanis, *B.C.H.* XVII, 1893, pp. 334 ff.; Noack, *op. cit.*, p. 450. On the causes and consequences of such stoppages, and the probable historical element in the Hercules legend, see Philippson, *op. cit.*, pp. 54 ff.

still 16 to 18 in. deep.¹ Now we are compelled, I think, to ascribe these ruts in large part, at least, to the traffic wagons of the Minyans during the many centuries of their domination at Orchomenus. After the rise of Thebes the towns of the Copaic Lake dwindled to complete insignificance, and even though the Thebans at a late date made Larymna a naval base, and fortified it strongly, the main lines of sea trade for central and southern Boeotia lay farther to the south and east. Nothing but the ancient and long enduring commerce of the Minyans can explain



FIGURE 3.—RUTS IN THE ROAD BETWEEN UPPER AND LOWER LARYMNA

the wearing of such extremely deep ruts in hard stone, for after the sixth century B.C., that is after the complete decline of Orchomenian power, the trade of this harbor must have been quite inconsiderable. Some indication possibly of the repute of Larymna of the ancient days may be gathered from Promathidas (*apud* Athen., 296b), who represents Glaucus, the famous sea god of Anthedon, to have been the son of

¹ See the accompanying illustration, No. 3, from my own photograph. These ruts are noticed briefly by Lolling, *Baedeker*⁴ (Engl. ed.), p. 186, but by no one else to my knowledge.

Polybus, the son of Hermes, and of Euboea, the daughter of Larymnus. This setting of Larymna back of both Euboea and Glaucus, the two greatest names of that region, is scarcely conceivable except on the supposition that some faint memory yet remained in the days of Promathidas (even if one could prove that he is not merely following an ancient tradition) of the early importance of the town. Locrian rationalizing genealogy, on the other hand, gives Larymna a much more humble rating (see below, p. 47).

This Minyan, pre-Locrian, occupation of Larymna finds confirmation in another quarter. Despite the fact that Lycophron and the geographers regularly assign Larymna to Locris, it is not mentioned in the Homeric Catalogue, nor in fact are the other Locrian settlements of the Aëtolimni¹ peninsula, Halae or Corsea. On the other hand, the Locrian villages to the northwest, especially between Thermopylae and Cynus are so elaborately enumerated, considering their utter insignificance, that it was a puzzle for later geographers to identify all the names with known sites.² Therefore the failure to mention any towns in what was nearly one third of later Locris, despite a marked readiness to notice the most insignificant settlements in the rest of the country, makes it well nigh certain that for the author of the Catalogue the Aëtolimni peninsula was no part of Locris; nor was it any longer Orchomenian, for to him Copae is already Boeotian, *i.e.*, Theban, and Larymna must have been cut off completely from Orchomenus.³ The towns of the Aëtolimni peninsula are

¹ This is the local pronunciation which I heard. The Austrian map gives "Aëtolima"; T. G. Skuphos, *Zeitschr. d. Ges. f. Erdkunde zu Berlin* 29 (1894), p. 415 "Aëtolyrna"; A. Philippson in the same volume of the same journal, pp. 8 and on the accompanying map, and A. Bittner, *Denkschr. d. K. Akad. d. Wiss., Math.-Naturwiss. Kl.*, XL, Wien, 1880, p. 3, "Aetolimas"; S. A. Papavasiliou, *C. R. de l'Acad. de Sci.*, Paris, 1894, p. 114, "Aetolymion."

² For example, East Locris has eight town names and a "river," the trifling Boagrius, exactly the same number as Phocis (!) whose principal stream, the Cephissus, a real river, is also mentioned. Boeotia is generally regarded as faring expecially well in the Catalogue, yet for the whole country, including Orchomenus and Aspledon, but thirty-one place names appear, and no river or lake, numerically a smaller proportion than that of East Locris (*e.g.*, Kiepert, *F.O.A.*, XV, gives *ca.* 48 town names in Boeotia against only 10 in Locris west of the Aëtolimni peninsula), and from the view point of relative importance, an absurdly disproportionate number.

³ When the Catalogue was written, the struggle between Thebes and Orchomenus had advanced so far that even Copae had been wrested from the latter. See Beloch, *Gr. Gesch.*², 1, p. 203, 3. With Copae Boeotian (*i.e.*,

therefore thus caught at a period when they were no longer Minyan, nor yet Locrian, and not of sufficient importance in themselves to warrant detailed mention. And yet it may be that the principal town of the district, Larymna, is not entirely overlooked in the Catalogue. As an Orchomenian dependency it might very easily have been omitted, since Orchomenus itself is barely mentioned and is notoriously slighted in the Homeric epic, and at just this period when the latter was declining rapidly before the advancing power of Thebes, Larymna was probably



FIGURE 4.—LARYMNA. THE INNER HARBOR

a place of very little consequence. But I venture to suggest, nevertheless, that Larymna appears in the form of Nisa in verse 508. The strenuous efforts of the interpreters to emend or explain this statement which they could not understand, are preserved in the Scholia and in the *apparatus criticus* of the

Theban), Orchomenus must have lost all touch with Larymna. Doubtless long before Copae was actually conquered the trade route must have been abandoned owing to the hazards of warfare, and Larymna may have been, therefore, after the passing of its ancient importance, and before the complete establishment of the Locrians, that is, during the time of the poet of the Catalogue, a spot so insignificant as to be omitted without compunctions.

larger editions. That Nisa = Nisaea = Megara (as though there were ever any good reason for making the Megarid a part of Boeotia) is a counsel born surely of desperation. How much more natural to understand it as an early name for Larymna. This latter place had been part of Orchomenian territory, the ἐπίνειον or ἐμπόριον of the great city by the lake, and the grouping with other names surely suggests Larymna. Arne and Mideia, which immediately precede, have, to be sure, never been located to all men's satisfaction, but Strabo's statement that they were in the basin of the Copaic Lake is after all by far the most plausible explanation. Anthedon, which immediately follows, is the very nearest seaport, and if Nisa be Larymna, one has a most natural group of four closely connected cities of northeastern Boeotia.¹

However, Nisa may or may not have been Larymna; at all events important inferences for early Locrian history have been secured. Since Larymna was the harbor of Orchomenus, and that city did not succumb to Thebes until the seventh century B.C., or the early part of the sixth (see above, p. 40, n. 1), then Locrian domination in the Aëtolimni peninsula cannot be much anterior to the year 600 B.C. In the chaos that attended the collapse of the Orchomenian hegemony, when the great engineering works of the Copaic Lake were suffered to fall into permanent decay, the hold upon the distant seaport must have been completely relaxed. It was then for the first time possible for the Locrians, who had established themselves firmly at numerous points to the north and west, to expand yet further and to occupy the feeble towns of this peninsula. For it is simply unthinkable that a strong power in northern Boeotia would allow itself to be cut off from its only natural seaport by a relatively feeble folk like the East Locrians. And indeed, when Thebes some centuries later came to dominate completely the north as well as the south and centre of the land, her statesmen proceeded at once to occupy the ancient outlet of the north shore of the lake.

That the Locrians came from the northwest originally there can be no doubt, and that there was some pressure from that

¹ Jardé, *B.C.H.* XXVI, 1903, p. 331, Hirschfeld, *Pauly-Wiss.*, I, col. 2360, and Miss Walker and Miss Goldman, *op. cit.*, p. 420, wrongly follow Strabo in interpreting ἐσχατῶσαν of Anthedon (B 508) as proving that for Homer Larymna was a Locrian town. The adjective means no more than that Anthedon was on the limits of the land, as indeed it was, being on the sea-coast.

quarter already before the fall of Orchomenus appears probable from the existence of a singular wall of large polygonal blocks which extended from the sea to the cliffs at the narrows between the bay of Opus and the mountain (now called Veles).¹ Of course walls at narrow passes in Greece always looked to the north and not the south.² This wall must therefore have been intended to keep out invaders from the northwest (*i.e.*, the Locrians, for other invaders of central Greece always crossed into the plain of Phocis long before reaching this point) out of the Aëtoliimni peninsula, *i.e.*, away from the port of Larymna.

The final consequences are, therefore, that the Locrians were pushing down the coast before the complete decay of Orchomenus, but did not reach their full extension in historical times until after the year 600 B.C. or thereabouts. They were not, therefore, as has been supposed, a very ancient stock, who were one time spread far and wide from the Gulf of Malis to that of Corinth, and later torn asunder and driven to mountain valleys and a narrow coast line by invaders who forced their way in by the valley of the Cephissus,³ but the Locrians of the East and West are clearly only two separated tribes, like the half tribes of Manassah, moving down from Pindus (dialectically they belong to the

¹ Cf. Körte, *Ath. Mitt.* IV, 1879, p. 271, 2, who, however, thinks this wall dates from the time of Epaminondas (see below). That the Boeotians at this time should have erected a large polygonal wall seems to me quite impossible. In the fourth century the Locrians were feeble and passive enough, and besides always to be found on the side of Boeotia anyway. Fortifications at this point in the fourth century can have no meaning. Thebes was campaigning frequently enough in the north but always successfully, and on the offensive. Thessalians or Phocians would have used any number of other passages. Compare also the remarks of Miss Walker and Miss Goldman, *op. cit.* p. 421.—I did not myself see this wall, nor have other recent travelers in this region, but there is no reason to doubt its former existence. The earthquakes of 1894 wrought great havoc at this precise spot, and a considerable tract of land sank below the level of the sea. The remains of this old polygonal wall very likely perished then, or in the necessary reconstruction of roads and retaining walls. On the effects of the earthquake here, see Th. G. Skuphos, *Zeitschr. d. Ges. f. Erdkunde zu Berlin*, 29 (1894), pp. 425, 438, 441, 445, 452, 455; C. Mitropoulos, *Petermann's Mittheil.*, 40 (1894), pp. 224 f.; S. A. Papavasiliou, *C. R. de l'Acad. des Sci.*, Paris, 1894, p. 114.

² As the walls at Tempe, Thermopylae, and the Isthmus.

³ As many have supposed, *e.g.*, B. G. Niebuhr, *Lect. on Ancient Ethnography*, I, p. 123; H. Kiepert, *Lehrb. d. alt. Geogr.*, p. 228; H. F. Tozer, *Lectures on the Geography of Greece*, p. 225; Wilamowitz, *Hermes*, XXI, 1886, pp. 108 f.; J. B. Bury, *J.H.S.* XV, 1895, p. 229; W. Aly, *Philologus*, LXVIII, 1909, p. 440; R. W. Macan on Hdt. VII, 176.

northwest Greek tribes), who divided at the mountain mass of Oeta, some heading southwards to the Gulf of Corinth, others eastwards by the Gulfs of Malis and Euboea.¹ They came probably in small numbers to the east, as their numerical feebleness at all times and the highly aristocratic organization of their state would signify. They found an old settled population, which seems to have been called, or identified with, the Leleges, and with whose legends they interwove in part their own.²

In concluding these historical inferences, I may point out that the Locrians had apparently a sound tradition regarding their own relatively late occupation of Larymna. Pausanias (IX, 23, 4) tells us that Larymna received its name from a daughter of Cynus. Now as I have elsewhere observed (*Philol.*, LXVII, 1908, pp. 440 ff.) this archaeological and rationalistic mythology of Locris is not without considerable elements of historical truth. Cynus is made a son of Opus, as being the eponym of the principal harbor of the metropolis. Larymna is the daughter of Cynus, partly because the place was regarded as a harbor of secondary importance, and partly, no doubt, because its occupation was secured at a later date—for the Locrian genealogical table shows evidence of regarding genuine chronological sequence.³

Finally we may note a faint echo of a tradition which represented the oldest Locrian settlements of the east coast as being near Thermopylae. Stephanus Byz., s.v. 'Αλπηνοί remarks ἔστι καὶ μητρόπολις Λοκρῶν. Now Alpenoi, or Alponos (the better attested form), was in historical times an utterly insignificant village, mentioned only incidentally by Herodotus and

¹ Compare Beloch, *Gr. Gesch.*,² I, 1, 89.

² There is not the slightest evidence that the Locrians ever spread from sea to sea across what was later Phocis. Not a trace of Locrian legend or of characteristic names or cults appears in the whole region. The name Opus of a promontory in South Phocis (*C.I.L.* III, 567 and *Addit.* XVI, p. 987, 21), as well as of towns in Achaëa and Elis, may have been brought by various northwest Greek tribes from their earlier home (for that Locrians and Epeans were closely connected there can be little doubt), or else the name is pre-Locrian, -Phocian, or -Epean, as the case may be, for no satisfactory etymology has as yet been proposed. But these investigations, as well as any discussion of the Leleges, would lead us too far afield for the present study.

³ Thus Physkos, as the eponym of the Physkeis (an obsolete tribal designation), is very plausibly made the predecessor of Locrus, as he in turn the father of Opus (the tribe is always older than the city which it founds after the migration). Cf. the discussion referred to above.

Aeschines in accounts of battles at Thermopylae, and never thenceforward (except rarely in inscriptions and, of course, by Stephanus). Its rôle as *μητρόπολις* could be due only to a tradition regarding the earliest settlement of the land, as in the historical period it was quite overshadowed by Opus. Furthermore the early prominence of Thronium in Locrian legends (see below), and its inconsequence in historical times, substantiates the view that the Locrians were settled for a considerable time, principally, if not exclusively, in the region between Oeta and Cnemis, *i.e.*, in the extreme western portion of the region they later occupied.

We are now prepared to consider more closely Strabo's statement about Upper Larymna: ἡ (*i.e.*, Lower Larymna) προσέθεσαν Ῥωμαῖοι τὴν ἄνω. What do the words mean? Du Theil and Koraes, supplying in thought some such word as *ὄνομα* translated: "surnommée par les Romains, la haute."¹ There are several objections to this. (1) Such a use of *προστίθημι* alone is unparalleled. (2) What did the Romans care about trifling distinctions in the names of towns and suburbs? The natives would have had a thousand occasions to differentiate for one that the Romans could ever have. (3) It makes arrant nonsense of the passage, attributing a statement regarding the upper town to the lower; for in essence the text means if interpreted in this fashion: "There is an Upper Larymna to be distinguished from a Larymna on the seashore which the Romans surnamed Upper Larymna" (!)

Groskurd translates it "welchem die Römer das obere einverleibten," which is the understanding of Leake and others.²

¹ Possibly they had in mind such a phrase as ἵππον προσετίθει πρὸς τοῦνομα (Aristoph., *Clouds*, 63), or οὔτε ἐκέλευε τὸ τοῦ πολέμου ὄνομα προσέθεσαν (Dio Cassius, 78, 18), but it is difficult to conceive how the word *ὄνομα* or the like could be omitted.

² *Op. cit.*, p. 291, "soon after it (*i.e.*, Upper Larymna) had been annexed by the Romans to Lower Larymna." So Ulrichs, *op. cit.*, p. 230, "Die Römer mochten zuletzt Ober-Larymna ganz aufheben und die Bewohner veranlassen, sich in Unter-Larymna niederzulassen."; also Dr. Smith, *op. cit.*; Frazer, *op. cit.*, p. 109. K. O. Müller, *Orchomenos* (ed. Schneidewin), p. 50, paraphrases Strabo thus: "erst die Römer vereinigten wieder, wie so von Anfang an gewesen sein mag, Ober- und Unter-Larymna in eine Stadt."; cf. also p. 473. In this same place Müller conjectures that both Upper and Lower Larymna were originally Opuntian, then, as Thebes became powerful, Lower Larymna came into its hands, only to become Locrian again "nach Thebens Fall," and gives a new turn to the same Strabo passage by paraphrasing it: "die Römer

This is not, like the preceding, a contradiction in terms, but is nevertheless unsatisfactory. In the first place, no plausible reason has been suggested for such a strange action on the part of the Romans. Granted that Lower Larymna was a better location for commercial purposes (as Ulrichs properly observes), why should the Romans greatly care if a few people were willing to inconvenience themselves by living two miles away from this harbor? In the second place, is this a natural meaning for *προστίθημι*, *i.e.*, "unite"? The word properly means "to add," for which it is the technical word as opposed to "subtract"—*e.g.*, *ἵνα μή τι...προσθῇς ἢ ἀφέλῃς* (Plato, *Phaedo*, 95 E); *οὔτε ἀφελεῖν ἔστιν οὔτε προσθεῖναι αὐτοῖς* (Arist., *Eth.*, II, 6, 9 [1106 b10]), etc. I have examined all the Lexica, and find no passage quite parallel to the meaning required here. "Unite" has many Greek equivalents, but I do not find *προστίθημι* among them. That is not to say that it might not be so used upon occasion, as negative proof is very hard to procure, especially in the present state of Greek lexicography, but I do not believe it to be the proper or natural meaning in such a context as this. The words ought to mean—"Larymna by the sea, to which the Romans added Upper Larymna," *i.e.*, as a new foundation. This is simple, and quite natural and proper. "The Romans" in this case can be none other than Sulla. When he visited that blind fury upon the seaports of Boeotia of which even he himself seems to have repented later, he destroyed Larymna.¹ His purpose was clearly *schlugen beide (i.e., Upper and Lower Larymna) zu Böötien.*" This last is so indefensible that it is fair to regard it as a mere *lapsus memoriae*. Girard, *op. cit.*, p. 35, is partly right in paraphrasing "*quae condita fuerat a Romanis*," but he neither explains the exact statement of Strabo, nor does he take notice of the controversy involved.

¹ He destroyed Halae and Anthedon at the same time, the autumn of 86 B.C. (Plut., *Sulla*, 26). The second army of Mithridates must certainly have used these ports to land their troops in northern Boeotia, and it was natural that to these same points the remnants of the defeated troops should have made their way. Apart from the vengeance which such a man might naturally take on these wretched towns for yielding to the Pontic king (cf. Drumann², II, p. 383), Sulla had already suffered so much in all his operations from the fact that his opponent had command of the sea (and especially in the second Boeotian campaign which had been made possible only thereby), that he must have decided thenceforward to leave no more safe or fortified harbors along this coast for the enemy to use as a base of operations. As for the little village of Halae, Sulla made no arrangement for any rehabilitation, but allowed it later as a *fait accompli* (Plut.). For the more important town of Larymna some special provision of a change of location was natural, if not actually necessary.

to ruin the harbor towns of the northern coast and to damage Boeotia, to whose principal town, Thebes, he had already dealt a blow from which it never recovered. Learning that the region had at one time belonged to Locris, he may very naturally have decided to give it back to its earlier owners,¹ but in his desire to make certain that the Boeotians would not use it again as a harbor, or the Orientals as a base of operations, he must have done two other things: (1) he moved the city two miles back from the coast to a spot which was yet well adapted to manage the cultivation of both the upper and the lower valleys, and (2), he gave the new town a situation admirably adapted to defense, and completely blocking off all direct access to the harbor. It is plain that the new community was intended to have as little commerce as possible, and all that to pass inevitably through the hands of the Locrians, who were put in a strong strategical position to block the way leading to Boeotia and to command both valleys. And with this interpretation the archaeological evidence completely agrees. Upper Larymna was not settled at an early date, nor was it a long time inhabited. The walls are hastily built and now in utter ruins down to the very foundations.² Of course in a short time the superior commercial advantages of the harbor location drew men back to it, and under the *pax Romana* there was no longer danger of encroachment. We have reason to think, indeed, that Larymna became Boeotian again;³ Strabo (IX, 4, pp. 425 f.), in the description of Locris as constituted in his own time, fails to mention any city of the Aëtolinnei peninsula as Locrian. Of course he may be merely following an older source, but, it seems more likely that when the fury of Sulla had passed by, the long established claims of Boeotia were restored.⁴

¹ This would be in line with his treatment of Thebes, from which he took away half of her territory (Appian, *Mithrid.*, 54; Plutarch, *Sulla*, 12 and 19; Pausanias, IX, 8, 5.) Orchomenus and Alalcomenae also suffered.

² Nor is there any evidence that this town, like so many others, was used as a quarry by later settlements. There are none of any kind nearer than two miles away, and at that place there was more than enough hewn stone already at hand. The settlement here was certainly neither strong nor lasting.

³ Precisely as "the Romans" rescinded Sulla's confiscation of Theban territory (Pausanias, IX, 7, 6).

⁴ If any confidence is to be put in the report of Pausanias (IX, 24, 5), according to which Corsea and Halae were still Boeotian in his time, as is generally done (even by Beloch, *Gr. Gesch.*, III, 2, p. 359), it is quite possible that the conditions which had prevailed for a long time before Sulla were restored soon after his departure, or death.

However, as Locris, Boeotia, and Phocis were soon united in a *κοινόν*, that made no difference at all from commercial grounds, and, besides, the economic decline of this whole region rendered meaningless any quarreling over a harbor that was being used less and less.

After the first occupation by the Locrians, Larymna remained in their hands for several centuries. This is indicated by the genealogical relations referred to above, and the way in which Lycophron (*Alex.*, 1146) and others refer to it. Pausanias (IX, 23, 7) states: *καὶ συνετέλει δὲ ἐς Ὀποῦντα ἡ Λάρυμνα τὸ ἀρχαῖον. Θηβαίων δὲ ἐπὶ μέγα ἰσχύος προελθόντων, τηνικαῦτα ἐκουσίως μετετάξαντο ἐς Βοιωτοὺς.* The only natural meaning of these words is in reference to Theban hegemony under Epaminondas in the fourth century.¹ It is true that at a later date than ca. 364 B.C.² Larymna is represented as being Locrian, so by Pseudo-Scylax, *Peripl.* 60, and this work is commonly dated about 347 (Unger), or shortly after 337 (Müller); in any event a considerable length of time after the decline of Boeotia, and the loss of many possessions, one of which, Larymna, as the naval policy was certainly a recognized failure, we may plausibly conjecture was, doubtless without resistance, allowed to revert to its former local allegiance, under pressure from the rest of the tribe doubtless, as the men of Larymna themselves must have seen that their economic interests would be better served by a union with Boeotia. The remark of Pausanias that their action was voluntary is therefore extremely plausible. I should be inclined to assign the beautiful ashlar masonry walls of reddish limestone at Larymna to the ambitious

¹ So taken by Ed. Meyer, *Gesch. d. Alt.*, V, p. 461; G. Körte, *loc. cit.* It seems hardly proper to dismiss the explicit statement of Pausanias as Pomtow, *Neue Jahrb.*, CLV, 1897, p. 795, does: "Pausanias . . . der wieder eigne falsche Hypothesen mit dem Tone völliger Sicherheit vorträgt," and Beloch, *Gr. Gesch.*, III, 2, 360. That Larymna was Locrian again in 273 B.C. surely proves nothing in view of the extremely complicated and shifting relations of Locris to surrounding powers. At different times from the fifth to the second century Opus itself was Athenian, Boeotian, Phocian, Aetolian, Macedonian, and independent, and with some of these states connections were made and broken more than once. In the century that elapsed from the naval policy of Epaminondas to the date of the inscription at Delphi, there were plenty of opportunities for Larymna to become Locrian once more, notably after the dissolution of the Boeotian league and the destruction of Thebes by Alexander, if not shortly after the death of Epaminondas, as suggested later in the text.

² Epaminondas seems actually to have taken to the sea in this year. Considerable work on the harbors of Boeotia must, of course, have preceded.

designs of Epaminondas, whose naval program called for such care and effort, and the work itself would fall best in this age.¹ The later restoration of Thebes under Cassander, while it might have enlarged the territory of the state, had no such interest in powerful harbor fortification works as did the period of Epaminondas. There is, however, no evidence of which I am aware that Larymna was incorporated in Boeotia again by Cassander. The only certain bit of evidence, a Delphian inscription of the year 273-2, is a proxenos-decree in behalf of Εὐβίῳ Ἀλύπου Λοκρῶι ἐγ Λαρύμνας.² Of course, as Beloch (III, 2, p. 360) observes, this shows clearly that Larymna went over to the Boeotians definitely at least after the time of Cassander, and hence probably in the (hypothetical but not unlikely) revival under Abaeocritus, prior to 245 B.C. (cf. Beloch, III, 1, p. 642). This conjecture may now be regarded as certain since the admirable publication by Miss Goldman, in this JOURNAL, 1915, pp. 445 ff., of an inscription from Halae, dated ἄρχοντας Φίλωνος τῷ κοινῷ Βοιωτῶν. Now Philo, as Dittenberger, on *I. G.* VII, 237, has convincingly argued, falls between 260 (or possibly a little earlier) and 246 B.C. Since the fortunes of Halae were necessarily intimately bound up with those of Larymna (cf. also Miss Walker and Miss Goldman, *op. cit.*, p. 420), there can be no doubt that the latter also became Boeotian not long after 273-2, the date of the Delphian inscription just mentioned. Shortly after 229 B.C., possibly ca. 227, Larymna seems to have been still Boeotian, if one be inclined to insist upon a perhaps fair inference from Polybius,³ but the text is altogether too uncertain to lay stress upon the evidence.

¹ The fine fortifications of Halae, which was also, at least at a later date, a Boeotian harbor, seem to belong to the same style, and are in part at least of exactly the same reddish limestone. Compare Miss Walker and Miss Goldman, *op. cit.*, pp. 432 ff. Miss Goldman, in a letter, substantiates my statement that the material is identical.

² *S.G.D.I.*, 2593. J. Beloch, *Klio*, II, 1902, pp. 208 ff., 223 ff., and *Gr. Gesch.* III, 2, p. 357, sets this inscription (archonship of Archiades) in 273-2, disagreeing with Pomtow's first dating. The discovery of new inscriptional evidence has led Pomtow to accept Beloch's date. See *Gött. Gel. Anz.*, 1913, p. 148, 3, and *Klio*, XIV, 1914, pp. 314 ff.

³ XX, 5. 7. Without punctuation the passage reads: Ἀντίγονος...πλέων ἐπὶ τινὰς πράξεις πρὸς τὰ ἔσχατα τῆς Βοιωτίας πρὸς Λάρυμναν παραδόξου γενομένης ἀμπώτεως ἐκάθισεν εἰς τὸ ξηρόν αἱ νῆες αὐτοῦ. Schweighäuser puts a comma after Λάρυμναν, making that the objective of Antigonos, and is followed therein by Dübner and Büttner-Wobst. Yet the objective of the expedition

Between 226 and 216 B.C., Larymna was a Boeotian town, as is shown from the agonal inscription of Lebadeia.¹ In the of Antigonus is distinctly said to have been all along Asia (§11 αὐτὸς δὲ τὸν προκείμενον ἐτέλει πλοῦν εἰς τὴν Ἀσίαν), and the action of Neon in letting him sail away as soon as he saw what the real situation was is puzzling if not inexplicable, in case his object was really an attack upon Boeotia (cf. Niese, *Gesch. d. gr. u. maked. Staaten*, II, p. 326). Bekker and Dindorf put the comma after Βοιωτίας, which leaves πρὸς in a strange use with Λάρυμναν. Hultsch, following part of a first idea of Schweighäuser, reads, περὶ Λ. for πρὸς Λ., a reading accepted also by Strachan-Davidson (p. 445). Shuckburgh, following both parts of Schweighäuser's conjecture, παρὰ for the first πρὸς and περὶ for the second, translates "Antigonus . . . happened to be sailing on some business along the coast of Boeotia; when off Larymna," etc. One might note that the word Larymna is badly mangled, and the sentence contains also a *nominativus pendens*. This last, though unfortunately too common in Polybius, might, combined with other evidences of corruption, suggest the possibility of a lacuna.—Regarding the ebbs and flows in the bay of Larymna, it may be of interest to observe that Ulrichs (*op. cit.*, p. 231) had noticed that the tide was extremely high under a northeast wind. It so happened that on a perfectly clear and windless day (July 8, 1914) between 8:02 and 11:20 a.m. I noticed at the old bridge across the Revma (which by the way has eight arches and not five as Baedeker (Lolling) and Frazer say, though the water now flows through only six of them) a shift in the tidewater of more than 250 yards, indicating a change in level, as I then estimated, of between two and three feet. A flow and ebb only slightly in excess of this would have embarrassed any ancient fleet, accustomed as men then were to anchoring very close to shore.

Pausanias' statement that Larymna had a λίμνη ἀγχιβαθής (IX, 23, 7), has been generally emended to λιμὴν (so Ulrichs, *op. cit.*, p. 223, n. 13, followed by Schubart, Spiro, Hitzig and Blümner), as no deep-margined lake could under any conceivable circumstances have existed in the vicinity. The statement regarding the harbor is, however, fairly satisfactory. According to the British Admiralty map (*The Talanta Channel*), a depth of seven fathoms is reached at a point comparatively close by to the east of the old town. Comparing this with the same soundings of harbors in the vicinity (*The Talanta Channel* and *The Gulf of Volo with Oreos and Talanta Channels*) it seems that a depth of five or more fathoms comes closer to the shore just opposite Larymna than it does at Oropus, Aulis, Chalcis, Anthedon, Halae, Cynus, or Aedepsus. Eretria alone of the more important harbors has as good depth close to shore. The bay of Skroponeri has deep close shore anchorage, but the mountain, prevented it from becoming an important port.—The attempt of Philippson *Zeitschr. d. Ges. f. Erdk. zu Berlin*, XXIX, 1894, pp. 50 f. to defend the MS. reading in Pausanias by referring it to the spring basin of the old Kephalaria is futile. This point was about three miles away, and could never by any stretch of imagination have been called "a deep margined lake."—Bittner's suggestion (*op. cit.*, p. 3) that the whole upper valley of Larymna was a lake down to the historical period is too improbable to deserve a formal refutation.

¹ Her commissioners and βαβδοφόροι take part in celebrating Boeotian games, *I.G.* VII, 3078; completely published by Volgraff, *B.C.H.* XXV, 1901, pp.

second quarter of the second century B.C., Larymna was Boeotian, as we learn from an inscription of Mt. Ptoon,¹ and it was distinctly such when Sulla fell upon the country in 86 B.C. (see pp. 49 ff.). In the pursuit of the enemy after the battle of Orchomenus, Sulla completely destroyed Anthedon, Larymna, and Halae, obviously the principal naval bases of Mithridates. It was at this time, probably, as we have seen above, that Upper Larymna was established. Lower Larymna was Boeotian in Strabo's day, and Pausanias follows the same tradition (from his *Periplus* source doubtless). Thenceforward the town disappears from history. For a time in the period of the Christian era it seems to have been called Larissa. Such at all events is the testimony of the anonymous author of a geographical pamphlet entitled "Ὅσαι τῶν πόλεων ἐν τοῖς ὕστερον χρόνοις μετωνομάσθησαν" (best published by A. Burckhardt in his edition of Hierocles, Leipzig, 1893) p. 64, l. 54 (Parthey): Λάρυμνα ἢ Λάρισσα. The treatise in question seems to be later than Hierocles (*i.e.*, after 535 A.D.), but its exact date is unknown (K. Krumbacher, *Byz. Literaturgesch.*², pp. 417 f.). This definite and not incredible statement throws light, I think, on a passage in Solinus, 7, 25 f. (Mommson): *Boeoti* (a mistake for *Locri*) *iidem sunt qui Leleges fuerunt: per quos defluens Cephisos amnis se in mare condit.* (26) *in hac continentia Opuntius sinus, Larisa oppidum, Delphi, Ramne,* etc. Now widely spread as the name Larissa was, there is no other record of any for the whole region of Locris, Phocis, and Boeotia. Besides Solinus has just been mentioning the lower Cephisos and his source unquestionably contained some notice regarding the Locrians. It is hardly conceivable that he could have written *Boeoti* for *Locri* just here had there not been some confusing statements before him about Larymna being Locrian as well as Boeotian; and that it was an arrant blunder

365 ff. The date which Dittenberger assigned (first century B.C.) was shown to be wrong when the stone was removed to the museum and the complete inscription could be read. The mention of Ptolemy Philopater and the participation of a Locrian in the games are the deciding considerations in Volgraff's certainly correct reading.

¹ *I.G.* VII, 4137, Κάπιλλος Στράτωνος Αηρουμνεὺς ἀνέθηκε κτλ. As a real Locrian mentioned on the same stone is listed Καλλικλίδας Δοκρὸς ἐς Ὀπέοντος (No. 4136), there can be no doubt that Larymna was at this time regarded as a Boeotian city. This bit of evidence has been strangely overlooked. The inscription dates between 178 and 140 B.C. (Holleaux followed by Dittenberger).

for the Thessalian town is less likely, because Solinus goes right on to mention the latter in its proper place (8, 2). His source, or sources, must, therefore, have mentioned Larymna in this connection, and Larissa is put here for it because of some record of change in name, that the sources of Solinus gave (cf. note 2 below). In view of the evidence of the anonymous geographer quoted above I do not see how any other interpretation of this passage can be maintained.¹ As Solinus seems to take no notice of the provincial reforms of Diocletian, the *terminus ante quem* for the changed name of Larymna would be the end of the third century of our era.²

As will appear hereafter, Larymna had so declined in relation to Bumeliteia by the time of Justinian, that the latter had quite supplanted it. This fact probably will explain the change of name. The designation, Larissa, seems to mean a fortress,

¹ After the above was written, I discovered that Salmasius (*Plinianae Exercitationes*, Utrecht, 1689, p. 103a F) had made the following brief but apposite remark upon the passage from Solinus: *Sed in illa continentia nullum oppidum Larissa. Larymnam puto voluisse dicere.*

² The anonymous tractate and Solinus may now explain the curious errors of the Scholia on Lycophron, 1146. The older paraphrase (P) gives quite correctly πόλις [Κολχίδος] Λοκρίδος where Κολχίδος of B is probably a mere palaeographic error. On the other hand the Scholia give Λάρυμνα πόλις Θεσσαλίας to which Tzetzes added τὴν δὲ Λάρισσαν κακῶς λέγει Λάρυμναν. We must conjecture from these curious and egregious errors, which nothing in the context could possibly have suggested, that the more elaborate original (the commentary of Sextio perhaps?) had a statement about Larymna as a Locrian city, adding that it was now called Larissa (ἢ νῦν καλεῖται Λάρισσα, or the like). This the scholiast, having heard of the famous Thessalian Larissa, then stupidly abbreviated into Λάρυμνα πόλις Θεσσαλίας, while Tzetzes, with different but equal stupidity, actually censures the poet for having called Larissa Larymna, i.e., confused the two places!—Now that the oldest commentary had some indications of name changes here, may possibly appear from the fact that Tzetzes on this same verse remarks regarding the Spercheus: ὁς νῦν Σαλαμβρία καλεῖται. This is to be sure at variance with the anonymous author in the appendix to Hierocles, who gives: Πηνιὸς ποταμὸς ἢ Σαλαμβρία (8*), but the Spercheus also appears in these lists: Σπερχεὶος ποταμὸς δὲ νῦν Ἀγριομέλας (cf. 58*). Both statements are combined by Tzetzes, *Chil.*, IX, 705 f., who says that the Peneus, the Onochenus, the Spercheus, and others were called Salambria, but if there be any truth in the statement of the tractate just referred to: Σπερχεὶος ποταμὸς καὶ Ἀπιδανὸς Φαρσάλων ποταμοὶ (58*), there may be some excuse for the mistake of Tzetzes in the commentary on Lycophron.—In any event the fact that Larymna was later called Larissa cannot now be doubted, supported as it is by the direct testimony of the tractate, and the indirect evidence of Solinus and of Tzetzes, together with the Scholia to Lycophron.

burg, or *arx*. After the inhabitants had abandoned the place, the remains of its massive fortifications suggested the name *Λάρισσα* the *arx*, which, by the way, is only the ancient equivalent for the modern appellation of the town proper, as distinct from the district, *Kastri*. It is noteworthy by way of evidence that the site was not occupied by any considerable population in late Roman or Byzantine times, that there are no extensive remains of Byzantine churches, and few shrines in the immediate vicinity, so that the town cannot have been long occupied after the introduction of Christianity. Furthermore the excellent preservation of the walls shows that the site was deserted in the later



FIGURE 5.—UPPER LARYMNA. VIEW UP THE REVMA TOWARD THE COPAIC LAKE

period of antiquity and during the Byzantine and Turkish domination.

Finally it may be noted that some confirmation of Boeotian control of Larymna may be seen in the new inscription published in this JOURNAL for 1915, p. 321, which gives the rare and distinctively Boeotian name of *Ἰσμήνων*. The regularly formed letters without apices would date this stone as certainly no later than the second century B.C.¹

As to the local form of the name, it was *Λάρυμνα* as evidenced

¹ From the Boeotian period of course comes the gloss of Hesychius: *Λάρυμνα*. πόλις Βοιωτίας.

by the united testimony of texts (add to those already cited, the gloss in Hesychius (above) and Lycophron, 1146), and inscriptions.¹ The strange form *Ληρουμνεύς* of an inscription from Mt. Ptoon would seem to be a Boeotian dialectic form.²

As for signs of a change in sea-level between antiquity and the present (an important matter along the coast of Locris), the evidence is inconclusive.³ A very slight subsidence might be inferred from the fact that of the original eight arches of the bridge over the Revma (probably Turkish), only five are in full use, a sixth partly filled up, and the other two on the south side completely clogged (cf. p. 52, note 3 above). The city walls are

¹ Compare the inscription published by Jardé, *B.C.H.* XXVI, 1903, p. 329, No. 35c, 2 *Λαρύμνας* and 16 *Λαρύμνα*; the inscriptions cited above (*S.G.D.I.* 2593 *Λαρύμνας* and *I.G.* VII, 3078 *Λαρυμνεῖς*); *I.G.* IX, 1, 235, 4 *Λαρύμνης* (epic influence); *I.G.* VII, 1765, 11 (Thespiae) *Λαρυμνεύς*; *C.I.G.* II, 1936, 9 (Brit. Mus., provenience unknown) *Λαρυμναίω*.

² See note 1, p. 54.—The inscription shows the typical forms of the Boeotian dialect throughout. The *ou* for *u* is of course one of the most characteristic features of Boeotian inscriptions. On the other hand the *η* for *α* furnishes some difficulties. Dittenberger (*Syll.*², 557, n. 19) felt confident that the *η* represented *α* from *αε*, the town name being composed of *λᾱς* and *ἐρυμνός*, an etymology which he felt to be "loci naturae accommodatissima." However, it would be difficult to find anywhere in Greece a spot less likely to be called a *λᾱς* than the flat, low-lying peninsula on which the town was built. Nor were the fortifications, though noticeably well preserved now, in any way exceptionally massive for an early period of antiquity. Professor Buck had the goodness to send me the following note: "There is every reason to be puzzled by the *η* of *Ληρουμνεύς*, and I can think of nothing but an unaccountable vagary of the hand or the mind of the stonemason, who wrote as if the name of the town were *Δαρυμνα*. Without further evidence one will scarcely credit the real existence of such a form. As for Dittenberger's explanation, even if the etymology were appropriate topographically, I should think it remarkable that the uncontracted form should turn up here and here only, against all other evidence of simple *Δᾱρ*."

³ In this connection I might take occasion to correct Frazer, who speaks of Larymna having suffered in the earthquake of 1893 (p. 109). As a matter of fact Larymna felt only faint tremors at this time, when the epicentrum was near Thebes (C. Mitzopoulos, *Petermann's Mittheil.*, XL, 1894, pp. 218 f.). The great earthquakes which were most severe precisely on the Larymna peninsula and were felt even in Wilhelmshaven and Birmingham occurred on April 20 and 27, 1894. See the articles by Skuphos, Mitzopoulos and Papavasiliou quoted above, p. 46, note 1. The following bit of misinformation regarding Larymna is the more astonishing because of the average high reliability of its sources: *The Medit. Pilot*, IX, 4th. ed., 1908, p. 131: "Lake Topolias or Copais, whose waters discharge into this port (!) as well as Lakes Likeri and Paralimni which are connected with it by a canal, have been partially drained and brought under cultivation."

built very close indeed by the sea, so that the foundations are actually for the most part below high water mark, and the stone has suffered much from the action of the salt water. It is not impossible that originally they may have been a few feet farther away.¹ On the other hand the inner harbor is so absurdly shallow now that it is difficult to conceive of it as ever having been any more shallow. Furthermore the old polygonal wall on the inner harbor side is a considerable distance from the water's edge. Probably the harbor was artificially deepened in antiquity, an operation which would apparently not be difficult, as the surface



FIGURE 6.—UPPER LARYMNA. THE ACROPOLIS, SHOWING FRAGMENTS OF WALLS

near by seems to be composed of shingle and small stones only. This inner harbor is so small, and yet so powerfully protected with piers and towers, between which chains must have been drawn in antiquity, that it can only have been a war harbor.² As such, sheds along its sides could have accommodated a small-sized fleet. Since the towers are of the same style and material as the other later walls, I should have no hesitation in ascribing the

¹ In view of the difficulty of laying such a sea wall, where it does not appear to have been actually necessary.

² See Figure 4. I may note in passing Ulrichs' strange fancy that these piers at the mouth of the harbor were supports of an ancient bridge (*op. cit.*, p. 231).

powerful fortifications of this little naval base to Epaminondas, with whose general policy its date and construction best agree. The commercial harbor was on the east side, where considerable remains of two large moles may yet be seen.

At Upper Larymna I noticed that the city wall on the northwest, toward the mountain, can be traced for some 30 m., that towers appear at the two angles, northwest and northeast, and there was possibly one in the centre. The northeastern part of the hill was the acropolis, and towards the southwest there are traces of a gateway, possibly one leading to the lower town.¹



FIGURE 7.—LARYMNA. THE TOWN AND HARBOR FROM THE NORTHWEST

Figures 5 and 6 will give some idea of the general location of this settlement.

As for the etymology of Larymna, the word seems to be generally ascribed to the Carians (Leleges), doubtless in view of the Carian town of much the same name.² If it be really connected

¹ The iron and nickel mines which A. Struck (*Zur Landeskunde von Griechenland*, Frankfurt a.M., 1912, p. 20) ascribes to Larymna belong really to what was anciently Boeotia, being situated at Neo Kokkino just above the *Megale Katavothra*. The ore steamers remain in the deeper water on the east side of the bay, which is more easily reached by the railroad from the mines. See the general view, Figure 7.

² G. Meyer, *Die Karier*, Königsb. Diss., Gött., 1885, p. 18; A. Fick, *Vorgriech. Ortsnamen*, p. 80 (Carian), p. 136 (Lelegic); O. Gruppe, *Griech. Myth. u. Religionsgesch.*, p. 260, 9. L. Grasberger, *Studien zu griech. Ortsnamen*,

with Λάρυμνα, Λώρυμνα, etc., the gloss in Hesych.: λωρυμνόν· βαθύτατα, κατώτατα would suggest a most appropriate meaning for the name Λάρυμνα, as it lies on the sea at the very lowest point of the Cephissus-Copais valley, occupying besides an extremely low elevation only a very few feet above actual sea-level, and is quite without an acropolis of any kind. The historical conclusions that may be drawn from this must await the solution of the vexed questions of the prehellenic ethnography of Greece.¹ It may be suggested, however, as plausible, that upon this fact of the appearance of a rare place name both in East Locris and in Caria, and on certain other facts of the same sort, may have been based the oft-repeated assertion that the Locrians were originally Leleges (*i.e.*, Carians).²

Würzburg, 1883, p. 262 (cf. 169), connects it with λαφ, λάρα. Dittenberger's etymology, λᾱs+ἐρυμνός, has been discussed above. It might be noted that some support for the Latin authors who call the Carian town *Larumna* (Mela), *Lorimna* (Tab. Peut.) and *Larymna* (Pliny), whereas most Greek writers call it *Loryma*, may be found in Georgius Cyprius, 1467 [Gelzer], ὁ (*i.e.*, the bishop of) Λαρύμων. This presupposes a nominative Λάρυμνα, a form which appears in Const. Porph., see *Themat.*, III, 37, 9, (Bonn ed.).—For a theory of religious-historical relations, see O. Gruppe, *Griech. Myth. u. Religionsgesch.*, p. 260.

¹ Lobeck, *Pathol. Serm. Gr., Proll.*, p. 170, pointed out that Λάρυμνα was a feminine form, while Λώρυμνα was a neuter plural (cf. E. H. Tzschucke on Pomp. Mela II, 45) and λωρυμνόν an adjective, but that merely calls attention to the fact that the three forms are not identical; they may be closely related for all that.

² In this connection it is well to remember that there was a tradition in accordance with which Minyans and Leleges were very closely connected if not actually identified. (*Plutarch, Quaest. Graec.*, 46: a law at Tralles about the proper atonement to be made by the person who had killed a Minyan or a Lelex, τὸν κτείναντα Μινύην ἢ Λελέγην). Larymna as the haven of the Minyan Orchomenus and as having a name suggestive of the Carian city would thus be a link in the line of argument used to identify Carians and Leleges. It is worth noting also, that though the Leleges are said to have been identical with the early Locrians, they never forced entrance into the list of eponymous ancestors beginning with Amphiktyon and ending with Aias. (cf. *Philol.*, LXVII, 1908, pp. 440 ff.). Nor is there any actual record of them about Opus or Cnemis. Pliny's source, however (see above), connects his statement about the Leleges with the notice regarding the outlet of the Cephissus, for as the jumble stands now in Pliny, it would appear that the Epi-cnemidians were the Locrians who lived at the mouth of the Cephissus, a statement which is notoriously false. The authority which Solinus followed (in this case certainly something more than Pliny, see above) also spoke of Leleges in immediate connection only with the mouth of the Cephissus. We can hardly be wrong therefore in conjecturing that the tradition of Lelegic origin for the Locrians was built up in large part at least about Larymna, its name and its historical associations.

As the Locrians seem to have occupied this part of their country only at a relatively late date, were at no time very numerous, and seem to have established aristocratic forms of government suggestive of the subjugation of a relatively large number of predecessors in the land, it may well be that some remnants of the prehellenic population of Greece may have lingered on in this out of the way region until well into the historical period. That the Locrians proper were as pure Greek as any other tribe, however, their dialect, cults, and mythology attest.

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THE PROBLEM OF BYZANTINE NEUMES

THE musical notation of Greek liturgical manuscripts from the tenth to the thirteenth century has long been a puzzle to investigators,¹ although the notation from the thirteenth century onwards can be read with virtual certainty. The earlier, at present obscure, system may be called the Linear Notation (Abbr. NL) while the later decipherable system is called the Round Notation (NR). These notations have some common features.² Both contain: (1) Interval-signs, (2) Martyriae or key-signatures, giving the mode of every hymn, (3) Hypostases or subsidiary signs, indicating duration, expression, or other peculiarities of execution. The melody is not given, as in our music, by shewing the pitch of every note. From the Martyria we can infer the pitch of the first note alone. All subsequent progressions are reproduced by the interval-signs, which tell us how far above or below the preceding tone any given syllable is to be sung.³

The Martyriae are in most cases simply the first four Greek letters, giving the number of the mode, with the abbreviation $\pi\lambda$, or $\frac{\lambda}{\pi}$ for the plagal modes. The third plagal is called Barys or "deep," and its name is sometimes abbreviated. Various

¹ Authorities: Am. Gastoué, *Introd. à la Paléogr. mus. byz.*; H. Riemann, *Die byz. Notenschrift*. Only these two writers have seriously attempted to transcribe music of the Linear System. Neither, so far as I can judge, has been successful. P. J. Thibaut, *Origine byz. de la Notation Neumatique de l'Église latine*, discusses many of the symbols.

² The comparison of the musical setting of hymns extant in both notations only proves a general likeness, but does not enable us to identify any formula definitely.

³ For the Round System cf. (besides the books already mentioned) O. Fleischer, *Neumenstudien*, T. 3 (This is the most useful for beginners, but only deals with the latest phases of NR); U. Gaisser, *Les Heirmoi de Paques*. My articles in *B.S.A.* XVIII, and in *Musical Antiquary*, January and April, 1911, and July, 1913, also deal with the Round System. In *B.S.A.* XIX, I tried to discuss some points in the earlier Linear Systems.

theories are held as to the tonality of the eight modes. But in the present case they do not concern the matter at issue, for (1) the interval signs are independent of tonality; and (2) the Martyriae passed unchanged from the Linear to the Round System, so that any satisfactory account of their nature in the later notation will apply *ipso facto* to the earlier. For our purpose we may take the most generally held view of the modes, which may be found in the works of Gastoué and others.

If we compare the interval-signs in the two notations, we notice: (1) Of the fifteen signs found in the Round Notation twelve can be traced in the Linear; (2) in many cases familiar groups of signs seem to be common to the two systems (but not necessarily with the same value); (3) NL has a number of interval-signs which did not survive in NR. Some may have been altogether lost; but the majority were retained as subsidiaries of various kinds; (4) some of the subsidiaries in NR seem to be already established as such in NL. The main difficulty lies in our ignorance of the laws of subordination enforced in the Linear System. In NR certain signs lose their interval-value when combined with certain other interval-signs. This is called Hypotaxis. The rules are very complicated; but the mediaeval handbook called the Papadike¹ gives them clearly, and tabulates most of the combinations in use. But for the Linear System we are entirely in the dark. Thus, if *a* and *b* are two signs, we are left wondering whether a formula like *a/b* has the value of *a* plus *b*, or *a* alone or *b* alone. Uncertainty of text, which we have no means of rectifying, greatly adds to the difficulty of approaching an unknown notation. After many trials and experiments with the methods of other theorists, as well as with all those that seemed at all possible to myself, I am venturing to suggest the following scheme of interval-values for the various signs.² In the case of group-formulae any proposed evaluation is largely guesswork. For convenience I give the signs the names

¹ Published by Fleischer, *op. cit.*

² In 1912 I was enabled by the generous provision of grants from the Carnegie Trust for the Scottish Universities, and also from the Hort Fund of the University of Cambridge, England, to visit Mt. Athos and Sinai, where I photographed a large number of MSS. (I have since made trial versions of about 200 hymns in the Linear System.) My work was greatly helped by the kind encouragement of His Blessedness the Archbishop of Sinai and by the Brethren at the Monastery, where I had every facility for research afforded to me.

attached to them in the Round System, except where difference of usage might make this misleading. In Figure 1 are exhibited the interval signs used in the latest stage of the Linear System.

Figure 1 displays the Linear System of Byzantine Musical Notation, showing 23 numbered interval signs and their application in three staves of Greek text with musical notation.

The interval signs are numbered 1 through 23, showing various combinations of lines, curves, and dots representing musical intervals.

The first staff shows the notation for the text:
 1. ἮΧΟΣ Ἄ ΕΝ Τῷ ΟΥΡΑ ΝῶΙ. ΤΑ ΟΜΜΑ ΤΑ ΕΚ ΠΕΜ ΠΩ
 2. ΜΟΥ ΤΗΣ ΚΑΡΔΙΑΣ. ΠΡΟΣ ΕΞΩΤΗΡ. ΩΣΟΝ ΜΕ ΤΗ
 3. ΕΠΙΛΑΜΨΕΙ. 2. ἮΧΟΣ Ἄ ΑΓΙΩ ΠΝΕΥΜΑΤΙ. ΠΑΣΑ Η
 4. ΚΤΙΣ ΚΑΙΝΟΥΡΓΕΙΤΑΙ. ΠΑΛΙΝΔΡΟΜΟΥΣΑ ΕΙΣ ΤΟ ΠΡΩ
 5. ΤΟΝ. ΙΣΟΘΕ ΝΕΣ ΓΑΡ ΕΣΤΙ. ΠΑΤΡΙ ΚΑΙ ΛΟΓΩΙ.

The second staff shows the notation for the text:
 3. ἮΧΟΣ Ἄ ΔΕΥΤΕ ΑΝ ΥΜΝΗΣΩΜΕΝ ΛΑΟΙ. ΤΗΝ ΤΟΥ ΣΩ
 4. ΤΗΡΟΣ ΤΡΙΗΜΕΡΟΝ ΕΓΕΡCΙΝ. ΔΙΗΣ ΕΛΥΤΡΩΘΗ
 5. ΜΕΝ. ΤΩΝ ΤΟΥ ΧΙΔΟΥ ΑΛΥ ΤΩΝ ΔΕΣΜΩΝ. ΚΑΙ Α
 6. ΦΘΑΡCΙΑΝ ΚΑΙ ΖΩΗΝ. ΠΑΝ ΤΕC ΕΛΑΒΟΜΕΝ. ΚΡΑ
 7. ΖΟΝ ΤΕC. Ο CΤΑΥΡΩΘΕΙC ΚΑΙ ΤΑ ΦΕΙC ΚΑΙ ΑΝΑCΤΑC.

The third staff shows the notation for the text:
 8. ΩCΟΝ ΗΜΑC ΤΗ ΑΝΑCΤΑCΕΙCΟΥ. ΜΟΝΕ ΦΙΛΑΝΘΡΩΠΕ.

FIGURE 1.—LINEAR SYSTEM OF BYZANTINE MUSICAL NOTATION

- 1) Ison: Repeated note, as in NR.
- 2) Ison: This is the older form, and is alone found in the middle stage of NL. (In NR it is called Oligon, and = a second upwards.)
- 3) Apoderma (or Apodoma): Another stationary sign, used mostly at the end of phrases to express a repeated and sustained note. (In NR it has a similar use, but never stands alone.)
- 4) Oxeia, and 5) Petaste: Both, as in NR, denote an ascending second.
- 6) Kentema: Never used alone, but adds an ascending second to some other sign. The result may be a leap of a third. (In NR it makes, when attached to some other sign, an ascending third or fourth.)
- 7) Kentemata (δύο κεντήματα): Not used alone, but adds an ascending second, which is always taken by step (so in NR).
- 8) Hypsele: Usually seems to have no interval-value, but to indicate in combination with the ascending signs (4) or (5) and (6) that a large upward interval, generally a fifth, may be sung instead of the third which was actually reckoned. This device was perhaps meant to aid inexperienced singers, who might, if they preferred, sing the smaller interval, ignoring the Hypsele. (In NR it is never used alone; but with Oxeia or Petaste, it makes an ascending fifth or sixth.)
- 9) Apostrophus: Descending second, as in NR.
- 10) Bareia: Descending second. In NR it is a subsidiary with no sound.
- 11) Hyporrhoe: Two successive seconds downwards, as in NR. It cannot be the first symbol over a syllable.
- 12) Chamele: Usually in combination with Apostrophus. It turns a second into a fifth (or perhaps sometimes a fourth) without changing the interval-value (*i.e.*, the following interval will be reckoned as if a second, not a fifth, had been sung). A similar device has been noted with the Hypsele, No. 8 above. (In NR Chamele is never used alone, but makes with Apostrophus a descending fifth or sixth.)

Compound Signs.

- 13) Diple, or double Oxeia: It has the same sound as Oxeia, but indicates a note of double length. In NR it only lengthens a note, but has no sound.
- 14) Kratema (or Choriston?), and 15) Xeron Klasma: Ascend-

ing second with prolongation. Both are compounds whose elements are traced in the older NL; 14 is a stylised form of Petaste above Diple (one losing its interval-value by Hypotaxis), while 15 is made up of Diple and Klasma (No. 20 below). (These have no sound in NR.)

16) Kouphisma: This in NR = a second upwards, which is probably its value here. Form c. is always over two notes. The dot is probably the archaic point marking the conclusion of a phrase.¹ Some ornament is perhaps included, as the symbol *may* be made up of Petaste, Klasma and Hyporrhoe.

17) Double Bareia: Has the same value as the simple Bareia, but prolongs the note. (In NR it is called Piasma, and has no sound.)

18) Double Apostrophus (Ἀπόστροφαι σύνδεσμοι): Descending second with prolongation. Form a. is thus used in NR also. Two Apostrophis *vertically* superposed keep their full value—two descending seconds.

19) Kratymohyporrhoeon: Compound of 14 and 11, probably = an ascending and two descending seconds, the first note prolonged. In NR only the descending portion counts.

Groups of Signs.

The following rules of subordination appear to hold: (1) Ison annuls an ascending sign placed below it. (2) Diple is annulled not only by Ison but also by Oxeia, Petaste, another Diple or a descending sign placed above it.² (3) Bareia (whether single or double) is annulled by Apostrophus, however placed.

In other cases all the signs in a group keep their proper sound and interval-value.

Subsidiary Signs.

The following are classed as Hypostases or subsidiaries, because they never stand alone in the late Linear Notation, and appear to have no sound or interval-value.

20) Klasma (later also called Tzakisma): Probably indicates a staccato note with moderate emphasis.³ So in NR.

21) Argon (?) This sign seems to indicate a very slight prolongation—so slight that the transcriber would merely put a

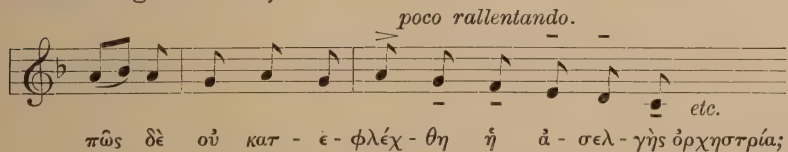
¹ This is regularly used in early neumatic MSS. eg. Laura B. 32: cf. Riemann, *op. cit.* p. 79.

² The effect of a grace-note may result from this collocation.

³ I have not expressed this in my versions. The effect will be sufficiently rendered by the intelligent singing of the words themselves.

small stroke over the note concerned. Some MSS. are very fond of this sign, as the following extract shows:

Hymn for Death of S. John Baptist, August 29th (Cod. Sinaiticus graec. 1217).



Here it occurs four times in succession. (Form c. is the Argon of NR, which seldom uses it.)

A somewhat larger half-circle is used in NR for a descending *third* (called Elaphron). It is possible that it is similarly used in *late* examples of NL in conjunction with the Apostrophus. But so far the instances are too few to warrant any definite conclusion.

22) Tinagma (?): Perhaps a tremolo. The Kylisma of NR may be the same.¹

23) Parakletike or Enarxis (?): Used at the beginning of a phrase, probably as a mark of expression (παρακαλεῖν = to entreat or exhort). It seems to have no sound or interval-value in late NL, though in the archaic forms it may have had.

These signs, most of which occur several times in course of our examples, are the commonest of the many subsidiaries used in the Linear Notation. For fuller details and conjectures the reader is invited to look elsewhere.²

General Rules for Transcription.

In every mode one or other of the finals may be used as a starting-note: it is easy to find by trial which is the more convenient. After any phrase has ended on a cadential note, we may make a fresh start from one of the other starting-notes³ (I show this by a wavy line in the transcript). As our system uses no sign of more than a third interval-value, the above method was the easiest way of making a leap when desired.⁴

¹ Fleischer, *op. cit.* p. 52 and 53, no. 6.

² Gastoué, *op. cit.* pp. 14, 33. Thibaut, *op. cit.* 34, 51, etc.

³ Whether the sequence can also be broken after notes only used for *medial* cadences (e.g., *f* in Mode I, where the proper finals are *d* and *a*) is at present uncertain.

⁴ Riemann's theory (*op. cit.* p. 57) that every phrase, no matter where the preceding one ended, must start from the "final," is not only most inconvenient in practice, but deprives us of almost all check on the transcription. Moreover, the division of phrases is itself often uncertain.

In the Round System, which was well supplied with signs for large intervals, this was not necessary. The return of the last phrase to the proper final is the chief test of the accuracy of transcription. When this fails, it means either that the MSS. is at fault, or else that the interval-signs have not been properly read.

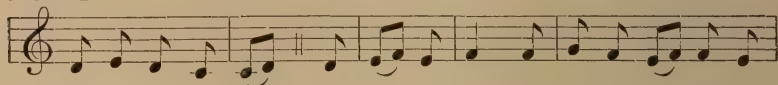
The rhythm of Byzantine music is a matter of some uncertainty. The question, like that of tonality, affects all stages of the notation, and is independent of the interval-signs. I adopt provisionally the simplest possible method,¹ by which every plain note is counted as a quaver, and a prolonged note as a crochet. A small double-bar marks the end of a phrase (usually indicated by a dot in the MS. text). The other bars do not answer to anything regularly occurring in the MSS., but are put in to aid the singer. It is generally admitted that the musical accents follow the word-accents, on which Byzantine prosody mainly depends.

Examples.

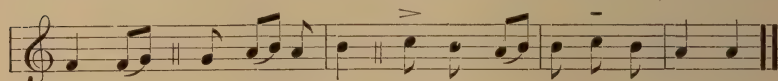
The three short hymns here reproduced can be read very easily by the rules already given. The first and second are parts of antiphones from the Octoechus²: the third is from the *Stichera Anastasima* ascribed to Anatolius,³ and also included in the Octoechus. Mode I has *a* and *d* as its Finals. Mode IV usually starts on *g*. Sometimes, as here, it needs *c* as its lower final, in which case the signature of one flat is required.

PARTS OF TWO ANTIPHONES FROM THE OCTOECHUS COD. SINAITICUS GRAECUS 1244 (SEE FIG. 1)

MODE I



(1) 'Εν τῷ οὐ - ρα - νῷ (2) τὰ ὄμ - μα - τα ἐκ - πέμ - πω μου τῆς καρ -



δί - ας (3) πρὸς Σὲ Σω - τήρ (4) σῶ - σόν με τῇ ἐ - πι - λάμ - ψει.

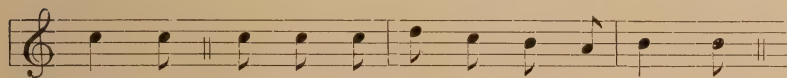
¹ Gastoué has, generally speaking, followed a plan similar to this.

² These are partly made up of verses from the Psalms. Examples given in W. Christ & Pararikas, *Anthologia*, p. 53. Our second example is on p. 54.

³ Text, *ibid.* p. 113.



(1) Ἀ - γί - ψ πνεύ - μα - τι (2) πᾶ - σα ἡ κτί - σις καιν - ουρ -

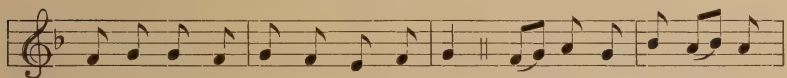


γαί - ται (3) πα - λιν - δρο - μοῦ - σα εἰς τὸ πρῶ - τον

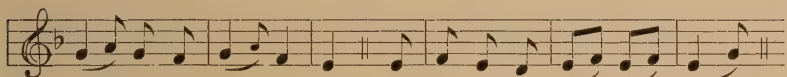


(4) ἰ - σο - σθε - νές γάρ ἐς - τι Πα - τρι καὶ Λό - γῳ.

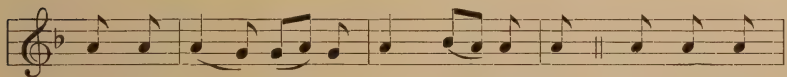
FROM STICHERA ANASTASIMA COD SINAIT GR. 1214



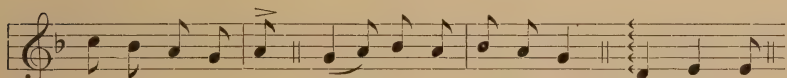
(1) Δευ - τε ἄν - υμ - νή - σω - μεν, λα - οί (2) τήν τοῦ σω - τῆ - ρος τρι -



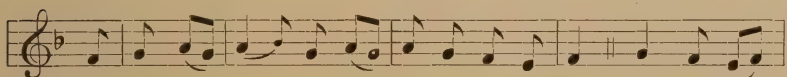
ή - με - ρον ἔ - γερ - σιν (3) δι' ἧς ἐ - λυ - τρώ - θη - μεν



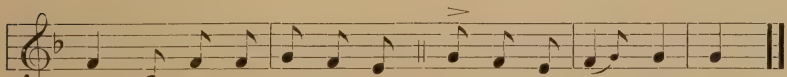
(4) τῶν τοῦ Ἀι - δου ἁ - λύ - των δεσ - μῶν (5) καὶ ἁ - φθαρ



σί - αν καὶ ζω - ἡν (6) πάν - τες ἐ - λά - βο - μεν κρά - ζον - τες.



(7) ὁ σταυ - ρω - θεὶς καὶ τα - φεὶς καὶ ἁ - να - σταῖς, (8) σῶ - σον ἡ -



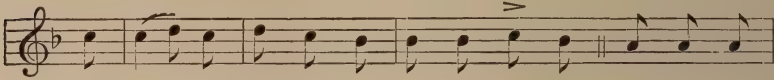
μᾶς τῇ ἁ - να - στασί - σαι Σου, (9) μό - νε φιλ - ἄν - θρω - πε.

Riemann reproduces two pages of a fine MS. of the Linear System (Paris, Bibl. Nat. Fonds Coislin 220).¹ I select two

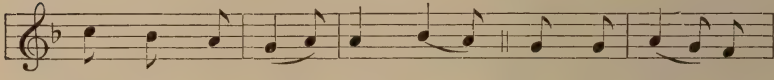
¹ *Op. cit.*, Pls. IV, V. In R's own version three of the seven odes appear to end on a wrong note—a difficulty scarcely to be avoided, as he suggests (p. 57) by giving the final Ison an indeterminate value. This would leave us without any criterion whatever for correct transcription. The Canon by Cosmas—Χέρσον ἀβυσσότοκον—to which these odes belong, is given in *Anthologia*, p. 172.

odes, which need no emendation. Mode III is like our scale of F major. In ode 8 at Q there seems to be a carelessly written Bareia; the combination still only equals a second downwards.

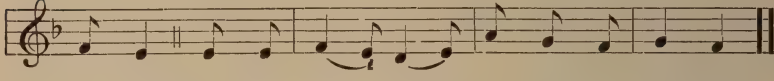
ODE 6, MODE III



(1) Ἐ - βό - η - σέν Σοι ἰ - δών ὁ πρέσ-βυς (2) τοῖς ὀφ - θαλ -

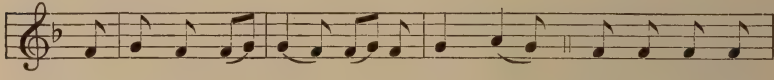


μοῖς τὸ σω - τή - ρι - ον (3) ὁ λα - οῖς ἐπ -

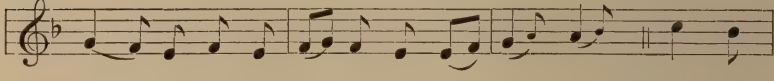


έσ - τη (4) ἐκ Θε- οῦ, Χρισ - τὲ Σὺ Θε - ὁς μόν.

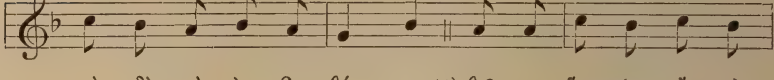
ODE 8, MODE III



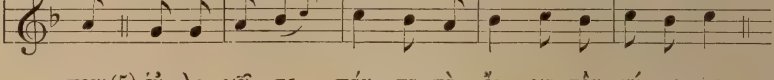
(1) ἁ-στέκ-τω πυ - ρὶ· ἐν-ωσ-θέν - τες (2) οἱ θε - ο - σε -



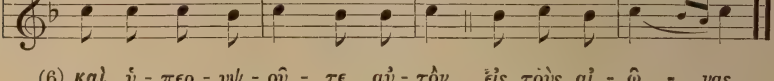
βεί - ας προ-εσ-τῶ-τες νε - α - νί - αι (3) τηῇ φλο -



γὶ δὲ μὴ λω-βη-θέν - τες· (4) θεῖ - ον ὕμ - νον ἔ - μέλ -



πον· (5) ἐὺ - λο-γῆι - τε πάν - τα τὰ ἔρ - γα τὸν κύ - ρι - ον,



(6) καὶ ὑ - περ - υψ - οῦ - τε αὐ - τὸν εἰς τοὺς αἰ - ῶ - νας.

It must not be thought that the majority of hymns in the Linear Notation can be read as easily as those given here. Owing to the uncertainty of value of many group-formulae, and the possibility of textual error, we can seldom be sure that our transcript is altogether right. The examination of a greater number of specimens, and further collation of various musical settings, should in time furnish us with a complete method of transcription. Such a result will be of the highest value for the history of mediaeval music.

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UNIVERSITY OF EDINBURGH.

GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

DECEMBER 29-31, 1915

THE Archaeological Institute of America held its seventeenth meeting for the reading and discussion of papers at Princeton University, December 29 and 30, in conjunction with the American Philological Association, and at Washington, D. C., December 31, with the Nineteenth International Congress of Americanists. Five sessions for the reading of papers were held (three at Princeton and two at Washington) and there were two joint sessions with the Philological Association. The abstracts which follow were furnished by the authors.

WEDNESDAY, DECEMBER 29. 9.30 A.M.

1. Mr. L. D. Caskey, of the Museum of Fine Arts, Boston, *A Greek Head of a Goddess Recently Acquired by the Museum of Fine Arts, Boston.*

This paper will be published in full in a later number of the JOURNAL.

2. Professor H. Rushton Fairclough, of Stanford University, *Some Greek Vases in the Stanford Museum.*

The Stanford Museum collection, though very heterogeneous, embraces many individual exhibits of distinct importance. The nucleus of the whole is formed by the objects acquired by Leland Stanford Junior, who at an early age developed unusual intelligence as a collector. In 1884, young Stanford secured in Athens various specimens of ancient Greek pottery, some of which, in view of their rarity or their beauty, are important enough to be placed on record. Among these are the following: (1) A small Corinthian aryballus, to be assigned to the latter half of the seventh century, B.C. It shows a bull's head, presented, full, between two lions. Cf. Morin-Jean, *Le Dessin des Animaux en Grèce*, where Fig. 101 shows a hare between two lions, and Fig. 140 a bull's head between two birds. (2) A beautiful example of an Attic lebes, 31 cm. high, 98½ cm. at the greatest circumference. It is decorated with a band of olive leaves and berries and preserves inside its original black polish. (3) Most of the specimens are those of red figured ware of the Fine

Style, second half of the fifth century, B.C. One is an Attic hydria, 28 cm. high, 75 cm. at greatest circumference. Five graceful female figures appear in a charming domestic scene, three seated on high-backed chairs, two represented as moving toward the central figure. A dog and a cockatoo are with the group. One seated figure holds a lyre. A mirror is in the field, to the right of the central figure. (4) An amphora, $30\frac{1}{2}$ cm. high and $68\frac{1}{2}$ cm. in circumference, shows two scenes, symmetrical with each other. On one side, a nude female dancer, holding a pair of castanets in each hand, looks back to a draped flute player, standing by. The black hair of the latter is varied in red with ivy-leaves. The second scene also shows two female figures, one seated, the other standing; one with a band across the hair, the other wearing a cap. The former holds a distaff and faces to the right; the latter looks back at the one seated, but her left foot is turned, as if she were about to move off to the right. In her right hand she holds up a piece of wool; in her left is a basket. (5) A crater, $29\frac{1}{2}$ cm. high, 81 cm. in circumference, shows a band of olive leaves below the lip, while beneath the figures, and confined to the space below each group, is a meander border. On one side is a Bacchic scene, with a bearded Dionysus, his right hand holding a cantharus and his left a thyrsus, advancing between a dancing Maenad, who plays a cymbal, and a bearded Silenus, who holds a lecythus in his right hand and a lyre in his left. The ivy on the thyrsus and on the hair of the figures is white. The second scene shows three standing male figures clad in the himation, one holding a staff and facing the other two. (6) One specimen is "a globular vase, with vertical looped handles on a high stem." It is 44 cm. high, and 55 cm. in circumference. The stem has suffered considerable damage. On it is preserved only the lower half of four female figures with two baskets and a stool. There is also the end of a fillet. On the main body is a group of eight female figures, two of them winged and serving the artistic purpose of dividing the whole group into two halves, each with three figures. The central figure in each is apparently the recipient of presents from the others. This peculiar vase is a so-called *λέβης γαμικός*, a form, according to Walters, "found almost exclusively in the Red Figured Period." Most of the extant specimens, as Miss Richter has shown, belong to the second period of this style. The only other example of this type of vase to be seen in America is in the Metropolitan Museum, New York. There, according to the official description, "the subject represented is probably the *Epaulia*, or day after the marriage, on which the friends of the bride brought the customary presents. In the centre is seated the bride playing the harp (trigonon). On both sides her friends approach to bring her gifts." There, also, we see four female figures on the stem. Three of them bring presents and one a fillet, while two baskets are on the ground. In the New York museum there is also a toy or diminutive *λέβης γαμικός*, showing likewise a representation of the *Epaulia*. The extant specimens of this type are very rare. Miss Richter (*Annual of the British School at Athens*, No. XI, 1904-5) gives only twenty as the total for Greece, with none for Italy, the British Museum, or the Hermitage. There are none in Paris, but there are two in Madrid Leroux, *Catalogue*, Nos. 207, 208), one in Athens (Pijoan, *Historia del Arte*, I, pl. xx), and four in Berlin (Furtwängler, *Beschreibung*). For a discussion of the subject, one may consult Brueckner on 'Athenische Hochzeitgeschenke' in the *Athenische Mitteilungen*, 1907.

3. Miss G. M. A. Richter, of the Metropolitan Museum, New York, *A New Euphronios Cylix in the Metropolitan Museum of Art.*

This paper will be published in full in a later number of the JOURNAL.

4. Dr. T. Leslie Shear, of Columbia University, *Head of Helios from Rhodes.*

This paper will be published in full in a later number of the JOURNAL.

5. Professor Allan Marquand, of Princeton University, *Some Sculptures in Princeton.*

This paper directed attention to the sculptures in public and private collections in Princeton. In Guyot Hall may be seen an interesting collection of prehistoric antiquities from Switzerland; in the Art Museum, amulets and *oushabtiu* from Egypt, an alabaster slab from Assyria, terra-cottas from Cyprus and Greece, stone heads from Syria, and marble sculptures from Greece and Rome. Attention was specially directed to an Athena head of the fourth century. For the Mediaeval period, the Art Museum contains a fine French statue, and an English alabaster relief. The Renaissance period is represented by sculptures from Italy, France, Spain, and Germany, while the modern sculpture of England and America is illustrated by a number of examples.

6. Dr. Joseph Clark Hoppin, of Boston, *The Bazzichelli Psykter of Euthymides.*

This paper will be published in the *Journal of Hellenic Studies.*

7. Professor James A. Montgomery, of the University of Pennsylvania, *A Latin Inscription and Some Other Antiquities in Southern Lebanon.*

The speaker contributed some notes on the archaeology of Southern Lebanon, describing some new groups of tombs and the fragments of what is evidently a Phoenician cult-pillar. He also read and commented on a Latin inscription which he discovered near the village of Abeih. It reads as follows:

OMRIUS
MAXIMUS
-IRAIFILIVS
IOVIMO---A
DESVOFECIT

"Omrius Maximus son of -ira made for Jupiter from his own property." This inscription in connection with a near-by deposit of tombs throws light upon the tomb builders in Lebanon who have long been an enigma to archaeologists. They evidently belong to the Roman period, and this dedicator was a man of Arabian stock, doubtless a member of the "Ituraean" race which, according to the classical historians, were then swarming into central Syria.

WEDNESDAY, DECEMBER 29. 2 P.M.

1. Dr. William J. Hinke, of Auburn Theological Seminary,
The Significance of the Symbols on Babylonian Boundary Stones.

The first definite information as to the meaning of these symbols came to us from a stone found by the French in Susa and published in 1900. In the inscription of this stone curses are invoked on all offenders in the name of the great gods, "whose shrines are made known, whose weapons are shown and whose pictures are drawn." Accordingly the symbols represent the shrines, weapons and pictures of Babylonian gods. The problem resolves itself, therefore, into an identification of the symbols with the gods they were intended to represent. Fortunately the Babylonians themselves have often written the names of the gods alongside of the symbols. In one case the order of the symbols corresponds to the gods as enumerated in the inscription. In this way it has become possible to identify twenty-two of the symbols with the respective gods. But the symbols were more than mere representations of the gods. They represented the gods in their astral character and are, therefore, identical with certain stars and constellations. This is at once clear in the case of the crescent, the sun-disk and the eight-pointed star of Ishtar, in which case Ishtar is identified with the planet Venus. But a number of other symbols are clearly astral. Thus on a stone of Melishipak we have an archer, with the upper body human, the lower that of a horse, with two heads and two tails, one of a horse, the other of a scorpion. The figure is also provided with wings. This is the first representation of the winged centaur and agrees in all its details with the representation of the sagittarius on the Egyptian zodiac of Dendera. With this sagittarius the scorpion is associated in both cases. There is also perfect agreement between the Babylonian and Egyptian sign of the capricorn. In the case of the waterman, the new boundary stone, found by the Germans at Babylon, shows the amphora on a pedestal, just as in Greek zodiacs, and behind it a god pouring out water from a jar over his left hand. Here the meaning of waterman is clearly suggested by the picture. But the conclusive proof that constellations were really intended by these symbols is furnished by two Babylonian monuments. One is the well-known stone of Marduk-apal-iddina I, published by Rawlinson, on which, in the last register, a winged lion is walking on a serpent winding along the lower edge of the register. These same figures appear on a tablet in the Berlin museum, recently published (Jeremias, *Handbuch der altorientalischen Geisteskultur*, p. 247) where the serpent has the name (*kakkabu*) *Štru* and the lion, the words (*kakkabu*) *Ur-Gu-La*, written alongside of them. This shows that by the serpent the constellation of the Hydra, by the lion, the sign of the zodiac immediately above it, Leo, was intended. Another Berlin tablet published by Jeremias names the seven stars, found on several of the boundary stones, as (*kakkabu*) *kakkabu*, "the star," i.e., "the Pleiades." Again the symbol of Nin-mah, known from the stone of Nazi-maruttash, as *markasu rabû*, "the great band," is identical with the *riksu*, the band of stars uniting the northern and southern fishes. This identification also explains why the symbol of Nin-mah generally follows that of Ea. The fishes succeed the waterman in the zodiac. Other probable identifications are that of the serpent coiled on top of many stones

with the dragon (draco) near the north pole. The wolf on several stones is probably the wolf star (*LIK-BAT*) and the raven the raven star (*U-ELT-EG-GA*). Thus a constantly increasing body of evidence is accumulating that the symbols of the Babylonian boundary stones represent the Babylonian gods, in their capacity as astral deities, identified with certain constellations of the zodiac and of the dodecaoros.

2. Professor W. Sherwood Fox, of Princeton University, *Some Egypto-Roman Embroideries in the Royal Ontario Museum, Toronto*.

This paper will be published in *Art and Archaeology*.

3. Dr. Lindley Richard Dean, of Princeton University, *Some Latin Inscriptions from Corinth*.

No abstract of this paper was received.

4. Mr. B. H. Hill, of the American School of Classical Studies, Athens, *Recent Excavations at Corinth*.

No abstract of this paper was received.

5. Mr. E. H. Swift, of the American School of Classical Studies, Athens, *Sculptures from Recent Excavations at Corinth*.

No abstract of this paper was received.

6. Mr. C. Q. Blegen, of the American School of Classical Studies, Athens, *Prehistoric Sites at Corinth*.

No abstract of this paper was received.

7. Mr. Philip B. Whitehead, of Janesville, Wisconsin, *The Mediaeval Basilica of S. Croce in Gerusalemme in Rome*.

The paper gave a brief outline of the history of the church, which may be summarized as follows. The Sessorian Palace, built in the early part of the third century, belonged in the fourth century to Constantine, who dedicated in it a chapel in honor of the relics of the passion. This chapel is now known as the chapel of S. Helena. The present basilica occupies a large hall of the palace, which was converted into a church at a later date by the addition of an apse. In the twelfth century, this hall-church was divided into aisles and given the typical basilica form. At the same time some very interesting frescoes were painted, which have been recently discovered. Slides were shown of the ground plan and some of the details still in existence of the twelfth-century basilica. A slide was also shown of a drawing made by the speaker giving a reconstruction of the church as it was before being restored in the barocco style of the eighteenth century.

THURSDAY, DECEMBER 30. 9.30 A.M.

1. Mr. E. T. Dewald, of Princeton University, *The Arch of Aragon*.

No abstract of this paper was received.

2. Professor George B. McClellan, of Princeton University, *Serpotta, an Italian Sculptor of the Baroque Period.*

Serpotta marks the dividing line in Sicilian art between the nearly extinct Renaissance and the growing exaggeration of the Baroque. In him the spirit of the Renaissance still lives to moderate and to modulate the exuberance of the Rococo. The material which he used was a peculiarly hard stucco which lent itself extraordinarily well to the finest and most detailed modelling and to extreme delicacy of line, and took a very high lustrous glaze, much like that which modern decorators call "egg-shell finish." It has proved itself extremely durable, and while there has been some restoration, fortunately most of his work is as he left it. Although almost all of his works are in the churches of Palermo, Serpotta is practically unknown, for nothing has been written about the man and scarcely anything about his work. He was an artist of great ability, of certainty of touch and breadth of vision. He was a great decorator, a great maker in white and gold, but he went beyond mere decoration. His portraits of women, his few studies of men and his innumerable studies of children, show that had he been so fortunate as to live and to work in more congenial and inspiring surroundings, he would have gone much further. His life was a struggle against the ignorance and bad taste of his city and his day, yet he rose superior to his environment. After his death his son and his followers struggled to keep alive the inspiration of the master, but what they had to give was a mere vague shadow of the master's spirit, and the master's light soon went out never to be rekindled. Serpotta is an artist worthy of all consideration for those who study decoration today.

3. Mr. George H. Edgell, of Harvard University, *A Youthful Portrait by Van Dyck in the Fogg Museum, Cambridge.*

This paper discussed a portrait of a Flemish nobleman, by Van Dyck, bought in April, 1915, by the Fogg Museum of Harvard University. The painting bears the date 1620, and is ascribed to Van Dyck on stylistic grounds. The attribution is sustained by comparison of this portrait with others done by the artist at this period, when he was twenty-one years old, and is approved by Dr. Wilhelm Bode, and others. The coat-of-arms in one corner of the painting reveals the fact that the nobleman represented is Alexander Triest, Baron of Auweghem, near Oudenarde.

4. Mr. Paul J. Sachs, of Harvard University, *A Newly Acquired Sasseta Lent to the Fogg Art Museum, Cambridge.*

No abstract of this paper was received.

5. Mrs. E. H. Dohan, of Philadelphia, *Four Covered Bowls from Orvieto.*

No abstract of this paper was received.

6. Dr. C. D. Lamberton, of Western Reserve University, *Influential Elements in Early Christian Art.*

The sepulchral element in the art of the Roman catacombs has been over-emphasized in most criticisms, for the frescoes, while serving as the decora-

tions of tombs, reflect the consensus of Christian hope and faith and the quality of Christian character, rather than express a single aspect. This is seen in the decidedly intimate treatment accorded the person of the Saviour, a reminiscence of the spiritual influence of apostolic days, in which the eternity of the life afforded by the gracious Christ takes into account present existence as well as the hope of the future. The Hellenistic basis in early Christian art is abundantly recognized. Indeed, the instances are numerous in which the art canon was stronger than ecclesiastical tradition, as, for instance, the variation in the number of Wise Men in the Epiphany—and in the number of baskets of loaves in the Multiplication themes. The Hellenistic quality is seen especially in the development of symbolism. It resulted in the production of static forms, monotonously repeated, but exceedingly rich in symbolic thought. And here is observed the real tie that unites the early period with the Byzantine, periods which are so different in most respects, especially in technique, since in the Byzantine we have an abundant richness and glory produced by plain display and in the Roman frescoes little beyond blocks of color that exist simply because the work is in the nature of painting. But in the one case the limitation of form resulted in an accession of symbolic sentiment; in the other case, the restraint of style resulted in a concentration of color and evident effect. The same effect of richness is produced in both periods by the same cause, an element that is characteristic of the spirit and art of Hellenism. Of purely oriental elements there is insufficient evidence, for the period under consideration, except as associated with the Hellenistic, but western influence is manifest in an attempt to introduce ecclesiastical or liturgical, rather than symbolic themes, in a determined attempt at realism in expression, and in the painting of a large number of portraits.

7. Mr. S. B. Murray, Jr., of Wells College, *Plans of Some Pagan and Christian Buildings in Syria.*

In the *Revue Archéologique* for 1906, Mr. H. C. Butler calls attention to the striking similarities in plan between the early Christian churches in Syria and the Tychaion at Iş-Şanamên, dated 192 A.D. An examination of the Hellenistic temples of Syria built before the Tychaion shows that many of them have this peculiarity in plan; the *naos* has an *adyton* at the inner end. In the temple at Burdj Bâkirâh, of 161 A.D., this *adyton* runs the full width of the *naos*, and its position is marked on the exterior by a pilaster on the *naos* wall. In the temple of Zeus at ẖanawât, dated, by the style of the architecture, in the latter half of the second century, a more developed form occurs. The *adyton* is flanked on either side by a smaller chamber, corresponding to the *prothesis* and to the *diaconicon* of the Christian church. The so-called Jupiter temple at Ba'albec shows another example of this threefold division of the inner end of the *naos*, and the floor of that part of the *naos* is raised above that of the rest and a "crypt" formed below. Finally, at ẖanawât, in the group of buildings known as the Serâyâ, the Christians deliberately copied the plan of an earlier pagan building having the threefold division at the end of the *naos*, and erected a church on the same spot, being unable to use the pagan structure because of improper orientation. Furthermore, they entirely ignored an earlier building of pagan "basilica" plan which forms part of the same group. It would seem then that, at least so far as Syria is concerned,

the plan of the Hellenistic temples had a most decided influence upon the plan of the early Christian churches.

8. Mr. John Shapley, of Brown University, *Origin of the So-called Mausoleum of Galla Placidia*.

No abstract of this paper was received.

THURSDAY, DECEMBER 30. 2.30 P.M.

Joint Session with the American Philological Association

1. Professor P. Van den Ven, of Princeton University, *The Monuments of Antioch in the Byzantine Literature*.

In the first centuries of the Christian era, Antioch as well as Alexandria and the Greek cities of Asia Minor had an important part in the development of Hellenistic and early Byzantine art, strongly influenced by many oriental elements. In those cities originated the great artistic wave which covered Constantinople and the western part of the Mediterranean world from the fourth to the sixth century A.D. and even later. Unfortunately, to appreciate the art in the Syrian metropolis, we are reduced to the information gathered from texts, for the monuments are practically all under ground. Those texts have been studied by Ottfried Müller in his *Antiquitates Antiochenae* (1839) and in an article of Förster in the *Jahrbuch des Deutschen Archäol. Instituts* (1897). The basis for the study of the topography and monuments of Antioch is John Malalas' *Chronicle*, of the sixth century, about which many difficult problems remain to be solved. That invaluable source of information is to be supplemented by Procopius' *De aedificiis*, Evagrius' *Ecclesiastical History* and more still by Libanius' *Oratio Antiochicus*. To these sources, which have been exploited to a great extent, one ought to add a new document, the *Life of S. Simeon Stylites the Younger* (died about 592), written in the first half of the seventh century by Arcadius, one of Simeon's disciples. Simeon's life was spent in the vicinity of Antioch and he had a part in many events which took place there between 525 and 592, and the biographer mixes with his narrative a good many observations concerning the topography and some monuments of the city. I have undertaken the publication of that curious text from the five extant manuscripts, and when the war broke out, it was being printed with many other Greek lives of Stylites, which were to be published by the Bollandist Father Delehaye. Unfortunately, the publication has now been stopped because the printer is living in a town very near to the front.

2. Mr. Roger S. Loomis, of the University of Illinois, *Treatment in Art of Alexander the Great's Celestial Journey*.

The legend of Alexander the Great's ascent to heaven in a basket or throne drawn by gryphons and of his forced descent to earth again, has its origin in Oriental legends of the Persian king Kai Kaus and the Babylonian hero Etanna. It first appears as a part of the Alexander tradition in a ninth century abecedary poem in Latin, and then in the *Historia de Proeliis*, and from that source spread into the many versions of the Alexander cycle of romances. As an artistic *motif*, the figure of Alexander flanked by his gryphon team enjoyed a

remarkable popularity quite independent of other incidents in the Alexander tradition. Appearing first in the Byzantine empire in the tenth century, the *motif* traveled eastward, northward, and westward, and is found in the work of places as far distant as Mesopotamia and the English West Country. Not till the decay of mediaeval traditions in the sixteenth century does this *motif* disappear. The frequency of its occurrence in the decoration of churches obliges us to look for a symbolic meaning. In some cases it is probable that the Celestial Journey was interpreted as a laudable striving toward heavenly things. But strong evidence points to an ecclesiastical tradition which regarded the episode as a type of Lucifer's attempt to seat himself on the throne of God and of his fall.

This paper will be published in full in a later number of the JOURNAL.

3. Miss E. H. Haight, of Vassar College, *Unpublished Illustrations of Apuleius' Story of Cupid and Psyche*.

No abstract of this paper was received.

4. Professor R. W. Husband, of Dartmouth College, *The Year of the Crucifixion*.

No abstract of this paper was received.

5. Mr. G. C. Pier, of New York, *Personal Ornaments of the Ancient Egyptians*.

If we except the "collar," an ornament of true "dog-collar" type, the *wesekh* is the earliest form of necklace to become nationalized by the ancient Egyptians. By the Fifth Dynasty the "dog-collar" has almost vanished and we then find the *wesekh* with or without the "yoke" the one seemingly essential ornament of the upper classes. The stela of Mena, dating from the Fifth Dynasty, shows us the collar and *wesekh* together upon the neck of a woman, and the *wesekh* alone upon the broad chest of the man. The man's ornament is finished with lotus-petal pendants, a form more often reserved for women. As a rule, men wore a simpler type of *wesekh*, a type composed of horizontal bands of semi-precious stone cylinders held in place by bars of the precious metals. At times, below the *wesekh*, men wore a chain of round or cylindrical beads, to the centre of which was attached a curious ornament which may well have held that very personal and precious possession of the Egyptian, his seal-cylinder. If we study the tablet of Mena, we see that his children wear at their necks a combination *wesekh* and yoke, an ornament apparently reserved for children. This type of *wesekh* early disappears. Judging by the monuments the yoke appears to have come in early in the Old Empire. At that date, it is worn by women and children alone. It becomes an essentially feminine ornament at the close of the Old Empire and throughout the Middle Empire. A striking example is furnished by the wall-paintings at el-Bersheh, where one of the little daughters of Thutiy is so adorned. This yoke ornament becomes one of the most common ornaments of the Egyptian noble toward the close of the New Empire, and thereafter down through the reigns of the Saitic kings. A detail from the walls of Seti's temple at Abydos shows this ornament as it had become changed and modified throughout the centuries. We see

that the somewhat elongated pendant of the Old Empire has now resolved itself into a true pylon, as indeed it had prior to the Middle Empire. The jewelled pectorals of the Amenemhats and Usertesens are superb examples of the new type. The gem-encrusted and open-work pylon of Ramses II and the gold pylon pendant of Ramses III are survivals of this Old Empire yoke form. The monuments and extant examples show us that the *wesekh* was commonly composed of a series of five or six rows of cylindrical amethysts, carnelians, sards or Egyptian emeralds, interspersed with beads and bars in the precious metals. From evidence supplied by the monuments themselves, we may infer that glazed pottery *wesekh* were very common; precious materials, of course, being reserved for the royal household, or the more exalted nobles. The Lady Nofrit, of the close of the Third Dynasty, wears the type of *wesekh* seen upon the monuments from the Old Empire to the days of Nectanebo. The type is again shown in the charming Old Empire group of Hapnuka and his wife. Here, indeed, we may remark both the banded *wesekh* and seal—if such indeed it is—the common ornament of the man, and the bandless but petal-fringed *wesekh* of his wife, which we may call the woman's type. We can imagine how frail the little pendants must have been, and it is not surprising to find that the Egyptian jeweller soon discovered that an outer band of beads was necessary to hold the delicate lotus petals in place. So, early in the Middle Empire, if not before, the *wesekh* assumed the form worn by Prince Khamhat, of the Eighteenth Dynasty. The Twelfth Dynasty sard, emerald and gold *wesekh* of Princess Ita-urt is a modified Old Empire model. The jeweller has enclosed the petals, yet added a band of hard stone (carnelian) drops. The Seventeenth Dynasty gold *wesekh* of Queen Ahotep is quite unique in style, yet, in its general outlines, it is the *wesekh* of old. By this time we see the conventional cylinders giving way to freer designs, such as the representation of the coursing animals, as here—a design so commonly found in the bronze and ceramic decoration of the Near and Far East almost to our own day. Queen Thiy's gem-encrusted gold *wesekh* is composed of lotus petals and *nofer* or "happiness" signs, each ornament being of unusually bold design. It is quite unlike the weak and imitative workmanship of Ramesside date, as evinced in the gold and sard *wesekh* from Zagazig and the emerald, gold and gem-encrusted *wesekh* from Tell Basta. The *wesekh* may be said to have found its fullest and ripest expression under the later Eighteenth Dynasty kings. Here it finally resolves itself into what appears to have been a sort of jewelled tippet or cape, an ornament of astonishing beauty and richness of material. Both Akhenaton, Harmhab and their queens, are often represented as wearing a garment of this type. In lieu of extant examples it is perhaps best illustrated by the *wesekh* inlaid upon the gem-encrusted and gilded coffins of Iuya and Thuya, parents of Queen Thiy, now in Cairo museum.

The following abstracts of papers announced, but not read, have been received:

1. Professor W. N. Stearns, of the University of North Dakota, *The Egypt Exploration Fund: A Plain Statement of Present Needs*.

For the season 1915-16 the Egypt Exploration Fund essays under great difficulties new activities. Work the past season was carried on at Ballabysh, where was found a nineteenth century cemetery. The new site proposed for 1916-17 is Tel Tibulleh, east of the Nile and in the district of Dakhalayah. Tel Tibulleh covers a large area and will require extensive diggings. The soil in places is very wet and, doubtless, pumping will be necessary to the carrying on of the work. The name of the ancient city is lost, but large blocks of stone scattered about indicate some place of no small consequence. The Cairo museum has gold jewelry, pots, and large statues from the spot, and the site is expected to be rich in objects of the Saite and Ptolemaic periods. Mr. Edgar, Inspector for the Department of Antiquities for Lower Egypt, is especially anxious for this site as one of the most promising locations under his jurisdiction, and one as yet untouched by the spade. What is done must be done quickly. Some years since, this land was sold. The rights of excavation retained by the government will expire in the spring of 1917. Naturally the burden of labor, the present season, must fall on the American members of the Fund. Though in the eastern Delta, it is believed that, despite rumors, the undertaking may be carried on without interference. The concession is a large one and will require about \$5,000 for its consummation. The best of trained superintendence is available. Mr. Wainwright, for example, has worked many years under the direction of Professor Naville and will bring to the task superior skill and experience. For the digging men can be secured for twenty to thirty cents a day. Twenty-five dollars will secure a man's services during an entire season. There is also an economic phase to this question. War has cut off many avenues of support and hundreds are in need of work to secure the bare necessities of life. These men are not landed proprietors, nor the holders of even small farms. They are villagers and need daily labor for food for themselves and families. One morning, for instance, when the camp woke up, there were two hundred or more men seated on the sand before the tents, waiting for a possible chance to work. They had come from a distant village and had travelled all night. The pallor of their cheeks bespoke their need, but there was no money, and, consequently, no work. Twenty-five dollars will support one of these men and his family for an entire season, will secure valuable service in the interests of science, will redeem one of the finest opportunities in Egypt, and may add to our store knowledge of incalculable value.

2. Miss Georgiana G. King, of Bryn Mawr College, *A Note on the So-called Horse-Shoe Arch in Spain.*

There are Roman steles of the second century which use this form for a decoration. There are Visigothic churches, in the Asturias and elsewhere, of the seventh to ninth century, which use it. Three churches in Leon show the work of Cordovan builders—S. Miguel de Escalada, Santiago de Peñalva, and S. Tomás de las Ollas. This all is Mozarabic work and shows how Spanish architecture might have developed without the intrusion of Cluny and Cîteaux. With all the Moorish work and then all the Mudejar, the Spanish imagination accepted the form as a matter of course and permitted it to appear, as an element of design or as a mere optical illusion, till 1536 at least.

FRIDAY, DECEMBER 31. 9.30 A.M.

Joint session, at Washington with the Nineteenth International Congress of Americanists, Section I, Anthropology, Second Pan-American Scientific Congress, and Affiliated Societies.

1. Sylvanus G. Morley, of the Carnegie Institution, Washington, *The Rise and Fall of Maya Civilization in the Light of the Monuments and the Native Chronicles*.

2. Herbert J. Spinden, of the American Museum of Natural History, New York, *Recent Progress in the Study of Maya Art*.

3. Alfred M. Tozzer, of Harvard University, *The Chilam Balam Books and the Possibility of Their Translation*.

4. Ellsworth Huntington, of Yale University, *Climatic Influences on the Southern Maya Civilization*.

5. Edward H. Thompson, of the Peabody Museum, Cambridge, Massachusetts, *Recent Excavations in Northern Yucatan*.

6. Raymond E. Merwin, of the Peabody Museum, Cambridge, Massachusetts, *Excavations in the Department of Peten, Guatemala*.

7. Marshall H. Saville, of Columbia University, *Archaeological Studies in Northwestern Honduras*.

8. Adela C. Breton, *The North Building of the Great Ball Court, Chichen Itza, Yucatan*.

9. Stansbury Hagar, Brooklyn Institute of Arts and Sciences, *The Maya Zodiac of Santa Rita*.

FRIDAY, DECEMBER 31. 2 P.M.

1. Sylvanus G. Morley, of the Carnegie Institution, Washington, *The Hotun as the Principal Chronological Unit of the Old Maya Empire*.

2. Luis Montané, of the University of Havana, *Découverte des premières Sépultures Indiennes de Cuba*.

3. Robert T. Aitken, *Porto Rican Burial Caves*.

4. H. Newell Wardle, of the Academy of Natural Sciences, Philadelphia, *Incense Burners from a Cave near Orizaba*.

5. E. A. Hooton, of Harvard University, *The Archaeology and Physical Anthropology of Teneriffe*.

6. H. G. Spaiden, of the American Museum of Natural History, New York, *On the Origin and Distribution of Agriculture in America*.

Abstracts of the papers read in Washington will be published in the Transactions of the Nineteenth International Congress of Americanists.

SPECIAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

AUGUST 2, 3, 4, 5, 11 and 12, 1915

IN connection with the Panama-Pacific Exposition, and in conjunction with the American Association for the Advancement of Science, the Archaeological Institute of America held a Special Meeting for the reading and discussion of papers in San Francisco (including the University of California and Stanford University), Monday, Tuesday, Wednesday and Thursday, August 2, 3, 4 and 5, 1915. Four sessions for the reading of papers were held, and at two evening meetings two addresses on archaeological subjects were delivered.

An Adjourned Session of this Special Meeting was, on invitation of the President of the Panama-California Exposition, held in San Diego, California, on Wednesday and Thursday, August 11 and 12, 1915. Four sessions for the reading of papers were held. The abstracts which follow were with few exceptions furnished by the authors.

MONDAY, AUGUST 2. 7.45 P.M.

Session at the Exposition Grounds, San Francisco

1. Professor Eugen Neuhaus, of the University of California, *The Architecture of the Panama-Pacific Exposition*.

The substance of this paper appears in *The Art of the Exposition* (Paul Elder, San Francisco, 1915).

TUESDAY, AUGUST 3. 10 A.M.

Session at the University of California

1. Professor H. R. Fairclough, of Stanford University, *A Problem in Virgilian Flora*.

The substance of this paper, under the title 'The Tinus in Virgil's Flora' is given in *Classical Philology*, Vol. X, No. 4, October, 1915.

2. Professor Oliver M. Washburn, of the University of California, *A Proposed Restoration of the East Pediment of the Parthenon.*

No abstract of this paper was received.

3. Mrs. Harry L. Wilson, of the Museum of New Mexico, *Life Forms in the Pottery of the Southwest.*

This paper is based on a study of a large collection of pottery, purchased by Dr. Hewett for the San Diego Exposition, from an excavation near Houck, Arizona. The specimens show so many varieties of the duck that one is led to believe that the Gila Valley must at one time have been a sportsman's paradise. The mallard and teal have been positively identified. We must also suppose that there was once a "manufactory" in the village, for so many jugs, cups, and vases of the same general type and size would otherwise be most unusual.

4. Mr. Carleton M. Winslow, Architect, San Diego, *Spanish Colonial Architecture at the Panama-California Exposition.*

The architectural key-note of the Panama-California Exposition is called the Mission Style, which is more an expression than an actual fact. The architecture of the Exposition, however, expresses, in general, the genealogy or past of this so-called style, and the paper attempts to exemplify this. Beginning with examples of the Byzantine, the pictures show the progress of building design and ornamentation, through Moorish, Italian, Spanish Plateresque, Middle period and Churrigueresque, and the Mexican to the so-called Mission style and the design of the Fair buildings, paralleled with pictures of buildings and details of the Exposition. The influence of the Franciscans in New Mexico was also briefly touched upon, exemplified in the New Mexico Building, and the work of the Pueblos and Hopis in a purely "American" style, as shown in the Santa Fé exhibit.

TUESDAY, AUGUST 3. 2 P.M.

1. Mrs. Zelia Nuttall, of the Peabody Museum, Harvard University, *Ancient Mexican Spindle-whorls.*

Mrs. Nuttall placed on exhibition her unique collection of type-specimens of spindle-whorls of clay, the work of the women of Ancient Mexico, who were the potters. The high degree of artistic skill they developed is demonstrated by the astonishing variety of forms, designs, and technique they used. Most of the specimens were collected in the Valley of Mexico from burial places near the great centres of pottery production at Cholula and Texcoco. By means of the collection (of 391 specimens), it is possible to follow the evolution of the whorl from a rough dish of clay into a thing of beauty, artistic in form, colour, and decoration. The fact that spinning and weaving were favorite occupations of the women of the ruling caste in Ancient Mexico probably accounts for the exceptional and superior character of these whorls, surpassing any found on the prehistoric or historic sites of the Old World.

2. Dr. Hector Alliot, of the Southwest Museum, Los Angeles, *Aspects of Neolithic Culture of the Santa Barbara Channel Islands, California.*

The recent expedition of the Southwest Museum to San Nicolas Island seems to have established more definitely than heretofore the fact that the mainland habits and traditions of the more advanced tribes of both the north and the south were merged in those of the Islanders of that time. Through numerous illustrations were shown the artistic perfection of the steatite vases, realistic animal sculpture, the diversity of arrow points and spear heads and abalone fish-hooks and ornaments. The more important contribution to the subject was the first record of a new form of burial, discovered on the northern end of San Nicolas Island, in a vast cemetery which, owing to its inaccessibility, had not before been explored. This type of burial, different from the general one of the mainland and from the accepted form of island mortuary custom, points to an accretion of the customs of the Yurok Indians of Northern California while retaining many distinctive features of the southern tribes. Its variation from the more ancient customs and the adopted Spanish practices of historical times, would indicate that this well defined type marked the highest development of aboriginal mortuary practice by the inhabitants of the Channel Islands before the discovery by Cabrillo.

3. Dr. Edgar L. Hewett, Director of the American School of Archaeology, *Latest Work of the School of American Archaeology at Quirigua, Guatemala.*

No abstract of this paper was received.

WEDNESDAY, AUGUST 4. 1.30 P.M.

Session at Stanford University

1. Dr. J. J. Van Nostrand, of the University of California, *The Imperial Cult in Spain during the First Century, A.D.*

No abstract of this paper was received.

2. Professor Jefferson Elmore, of Stanford University, *The Professions of the Heracleian Tablet.*

This paper will be published in full in *Roman Studies*.

3. Professor William E. Gates, of the School of Antiquity, Point Loma, California, *The Unpublished Material in the Mayan and Southern Mexican Languages*, read by Professor H. R. Fairclough.

By the above title I mean to cover geographically and culturally the field of the generally known Maya race; next the other civilized centres to the west of that field, such as the Zapotec of Oaxaca, and the Tarascan of Michoacan; and finally the very numerous minor dialects either related to these main stocks, or else unmistakable remnants, linguistic islands, of older races, pushed off into the corners and out of the way districts. The entire region bears the plain marks of successive race waves and changes far back of our

illuminated circle of dated history. We shall certainly uncover it more and more in the future; but for now our evidences are almost wholly those of comparative linguistics, helped out a very little by a few traditions or possible cultural survivals, little studied and less understood—and by a moderate amount of located artifacts, such as the “shoe-vases” of Nicaragua. The writer has collected a vast amount of material, either by the purchase of manuscripts or by the copying of manuscripts, in various American and European libraries. The possibilities, the very existence of this literature and what it means, have been completely buried and forgotten. Besides, it was a physical impossibility five years ago, while the material, now gathered all together, was scattered everywhere. When we really come hereafter to know the Mayance races, through their language, their architecture, art, science and, let us hope, through their hieroglyphic writing, also their history, we shall put them not below the plane where we now place the Greeks, the Etruscans, and the Egyptians.

4. Professor George Hempl, of Stanford University, *The Trilingual Glosses—Hittite, Assyrian, Sumerian*.

In a paper published in the transactions of the American Philological Association last year, it was shown that the speech of the Ancient Hittites, whose empire extended over Asia Minor, Syria, and Northern Mesopotamia, and was at the height of its power in the second millennium before Christ, was Greek, and that, therefore, this remarkable people were Greeks, and their great civilization a Greek civilization. It has for some time been known that the Hittites transmitted the culture of the Orient to the Greeks of the Aegean, but their racial affinities were unknown. It would now appear that at least the Hittite Greeks descended from central Europe to Mediterranean lands as early as the fourth millennium before Christ, in other words, much earlier than it has hitherto been supposed that men of Greek stock had come south. The radical character of these discoveries has hitherto led philologists and archaeologists to regard them with extreme scepticism. It is, therefore, of particular interest that all that the writer has claimed as to the Greek character of Hittite speech is convincingly substantiated by certain ancient tablets containing Hittite translations of Sumerian and Assyrian words. These tablets were used by young Hittites training to become scribes. As the Hittite words on the tablets coincide in form and meaning with the words found in later Greek, the identity of Hittite and Greek is established beyond controversy.

WEDNESDAY, AUGUST 4. 7 P.M.

Session at the Café St. Germain, San Francisco

1. Professor George Bryce, of Winnipeg, *Ghiberti's Gate of Paradise in Florence*.

No abstract of this paper was received.

THURSDAY, AUGUST 5. 10 A.M.

Session in the San Francisco Institute of Art

1. Professor Osvald Sirén, of the University of Stockholm, *The Relation of Religion to Art in Antiquity and the Middle Ages*.

The highest art is not the servant of either national or religious ideas; strictly speaking it owes allegiance to no other power than that of the artist's creative imagination, but it might to some extent be the expression of the same inspiring forces that manifest themselves through religious or national life. Art and religion are twin sisters, branches of the same tree, for they draw their nourishment, not from the outer world, but from an inner emotional reality. They both reveal something beyond the outer appearances, something we might call the soul of things. That which is important for the artist as for the mystic is not what he experiences through his senses, but that which he lives through, whether it be or be not concerned with the outer world. The objective world has no value for him but as a symbol, or a means by which to stir to action his creative imagination. This may appear a little strange in our day, but it was not always so, for in former times Art and Religion evolved side by side, as parallel lines of expression for man's soul-life. We can see this correlation most distinctly in the classic period in Greece. (This statement was further on proved by the explanation of some Greek sculptures and by quotations from some philosophers, like Plato.) Considered from a philosophical point of view, the classic art of Greece may be said to have attained an ethico-religious value also from the fact that it embodied the same fundamental principles that were considered essential to virtue. The basis of expression for both goodness and beauty was thought to be measure and harmonious balance. Most Greek authors of the classic period who discuss these questions return to this fundamental concept. Already Democritus strikes this keynote. He declares beauty to be perfect measure free from deficiency or excess: the ethical idea is thus embodied in an esthetic formula. For Plato, as we know, beauty and moral good were most closely allied, the essential principle in both was a certain measure, the perfect harmony of proportion. That Christianity introduced new subjects in art is of less importance than that it gradually permeated the emotional life, preparing the way for new artistic evolution. This occurred first in the East where the esthetic soil had been more thoroughly loosened and the new seed not so often trampled by the invasion of the barbarians. Here was evolved the abstract formula that contained the solution of the new problem—an art that with its whole being broke with the objective naturalism of antiquity, and in place thereof sought the expression of subjective emotional values in decorative symbols, born of imagination.

2. J. Murray Clark, K. C., of Toronto, *Notes on the History of Mining Law*.

This paper was read by title. No abstract was received.

3. Dr. Martin A. Meyer, of San Francisco, *Sanctity of First Born*.

The immolation of children was a common practice among the early Hebrews. The first born was looked upon as a particularly desirable offering, as various passages in the Bible show. Among orthodox Jews the institution of the redemption of the first born is still observed in connection with the Passover. This was originally a spring festival celebrating the rebirth of nature. Because of the practice of sacred prostitution the first born came to be looked upon

as the child of the god and so to be sacrificed to the god; and for the same reason descent was counted in the female line. Later ages modified the savage rites, the Pentateuchal legislation showing the latest stages.

4. Professor William F. Badé, of the Pacific-Theological Seminary, *The Jewish Sabbath in the Light of Babylonian Archaeology*.

The term *shabbatum* goes back in origin to the Sumerians. The Babylonians applied it to the full-moon period which fell in the middle of their months. Among them it was a propitiation day, but not a day of rest. Being the day of the full moon it occurred but once a month. The early Israelite Sabbath, in all probability, was also a full-moon festival, devoted to joyous feasting. The hostility manifested toward it by the preëxilic prophets may then be accounted for on the ground of its association with the astral religion of the Babylonians, as well as its Canaanite associations. About the time of the Exile (586 B.C.) a seventh day of rest, freed from association with moon phases, was inaugurated and called the Sabbath, although it had little in common with the earlier institution under that name. The writer of the first chapter of Genesis (P) arranged the creative acts to fit the scheme of a weekly cycle which in his day was already an established custom.

The paper appears in full, as part of the chapter on 'The Origin of the Decalogue' in *The Old Testament in the Light of To-day*, published November, 1915, by the Riverside Press (Houghton Mifflin Company).

5. Professor Edward A. Wicher, of the San Francisco Theological Seminary, *A New Argument for Locating Capernaum at Khan Minyeh*.

The question of the site of Capernaum is the most important of all topographical problems in Palestine, because it is so intimately connected with the environment of the ministry of Jesus. The key to the solution is to be found in an ancient Roman aqueduct running northwards from Khan Minyeh, and in the spring with which it is connected. The aqueduct, still in use in 1601, brought the water to Capernaum and the plain of Gennesaret beyond. This plain is described by Josephus, *Wars*, III, 10, 8, who tells us that it was watered from a most fertile fountain called Capernaum. It is natural to infer that the town of Capernaum, which was near the Plain of Gennesaret, grew up not far from the spring. Khan Minyeh is close to the plain, Tell Hum is not. There are numerous secondary reasons for regarding Khan Minyeh as Capernaum, one being that the ruins on the summit of Tell-el Oreimeh are those of an important place and are more extensive than those of Tell-Hum. Many passages of the Gospels bring Capernaum into close association with mountains, and Christ's reference to her being "exalted unto heaven" points in all probability to a conspicuous elevation. Now Tell-el-Oreimeh rises some 330 feet above the level of the sea of Galilee, and was crowned with buildings which would give it something of the appearance of an acropolis, from whatever point on the lake it might be viewed.

6. Professor Roy C. Flickinger, of Northwestern University, *Archaeology versus Estheticism in Dramatic Criticism*.

The paper will form a chapter in the writer's forthcoming book, *The Greek Theatre and the Drama*, to be published by the University of Chicago Press.

7. Dr. Edgar L. Hewett, Director of the American School of Archaeology, *Archaeology at the Panama-California Exposition*.

No abstract of this paper was received.

An Adjourned Session of the Special Meeting, in accordance with the invitation of the President of the Panama-California Exposition, was held at San Diego, California, when the following papers were presented.

WEDNESDAY, AUGUST 11. 8 P.M.

Session at Open Air Greek Theatre, Point Loma

1. Professor George Hempl, of Stanford University, *New Light on the Earliest History of Mediterranean Civilization*.

Professor Hempl gave a statement of the historical results of his Mediterranean studies during the past seven years. The important points were these: Venetic and Etruscan turn out to be Italic dialects of the Q-type and closely related to Latin. Old Sicilian, as Freeman prophesied, is practically a dialect of Latin. Old Sabellic is a P-dialect, related to Oscan and Umbrian. Hirt once called attention to the fact that the Italic Q-dialects are so different from the P-dialects that we must assume that the two peoples were long separated from each other before they became close neighbors in Italy. Tradition tells us that the Romans came from the Troad, in northwestern Asia Minor, that the Veneti came from Paphlagonia, which lay east of the Troad; and that the Etruscans came from Lydia, that is, from south of the Troad. We also have evidence of the presence of Etruscans in Cyprus, Crete, Lemnos, and on other Aegean coasts. These historical facts, taken in connection with the new linguistic finds, make it very probable that, while the P-branch of the Italic race descended southward from central Europe into Illyria and thence into northeastern Italy, the Q-branch made its way to the southeast through the Balkan peninsula and across to Asia Minor and the Aegean islands, as so many other Indo-European peoples did before and after their time. Later, some new movement of the peoples caused various representatives of the Q-stock to leave their eastern homes and make their way to Italy, bringing with them the art of writing and other elements of the civilization they had acquired in the East. In Italy they became neighbors of their cousins of the P-stock, who had advanced little, if at all, beyond the primitive civilization that they had brought down from central Europe, and to whom the Q-peoples now extended their higher culture.

The pictographic writing of the Minoans and Hittites Professor Hempl found to be iconomatic, and not ideographic as generally believed. Early Hittite and early Minoan revealed themselves as Javonian dialects, of the

Attic rather than the Ionic type. Both later gave way to A-dialects, the Javonian Hittite to Doric, which shows long separation from the Doric that we already know. All the cuneiform Hittite that Professor Hempl has examined is Doric Hittite. These facts can be explained only on the supposition that some time in the third millennium Javonian Greeks came down from central Europe, not only into Greece, but also into western Asia Minor and thence into Crete, developing in both countries great civilizations. Later, but much earlier than has been supposed, Greeks of other stocks followed, conquering those who had preceded them, and in some cases destroying the civilization that they found. Dorians overthrew the Javonian Hittites about 1400 B.C. and thenceforth called themselves Hittites, extending the empire over Syria and northern Mesopotamia. All this makes it necessary for us to recast our conceptions of the early history and civilization of Europe and the Near East.

THURSDAY, AUGUST 12. 9.30 A.M.

Session at Exposition Grounds, San Diego

1. Dr. Edgar L. Hewett, Director of the American School of Archaeology, *Archaeology at the Panama-California Exposition*.

THURSDAY, AUGUST 12. 2.30 P.M.

1. John Peabody Harrington, of the Bureau of American Ethnology, *Culture Destruction among the Mohave*.

No abstract of this paper was received.

2. Professor William E. Gates, of the School of Antiquity, Point Loma, *H. P. Blavatsky and Archaeology*.

The paper emphasized the importance of archaeology in its relation to human life, the Science of Man. The views expressed are those of the author and also of H. P. Blavatsky, as expressed in her books.

THURSDAY, AUGUST 12. 8 P.M.

1. Professor F. W. Shipley, President of the Institute, *Roman Portrait Sculpture*.

The paper dealt in particular with the development of Roman portraiture, Rome's chief contribution to ancient art, and touched upon the factors which contributed to its wonderful realism and individuality.

It dealt in particular with the identified portraits of significant Romans, such as Caesar, Cicero, Pompey, etc., and a few of the emperors, most celebrated either for their goodness or their badness, and discussed these portraits in relation to the known data in regard to the characters and personalities of the subjects. From the standpoint of individuality, the most striking portraits are those of persons unknown, some of them representing, no doubt, men who were prominent in the life of the Republic, but the majority, persons belonging to the middle classes and to the lower strata of society, the peasant types of the Republican period, and the merchants, tradespeople and freedmen of the time of the Empire. These portraits are of especial interest, since

they bring before us with concrete realism the various types of the common people of ancient Rome.

2. Professor George Hempl, of Stanford University, *Minoan Seals*.

The writer undertook to show that the pictographic writing on the Minoan seals is iconomatic, and not ideographic as generally assumed; that the small cross is a final punct, and not an initial punct as taught by Evans, though it sometimes is used both initially and finally, and that the language employed is Javonian Greek of the same type as Attic and early Hittite Greek. The most common group of symbols found on the seals, *door-leg* or *door-leg-silphium*, which Evans calls a "canting badge" (The *door* standing for "keeper" or "guardian," and the *leg* for "leader" or "dux"), furnishes the most frequent spelling of the word *τύπος* "stamp" or "seal." Thus, *θύ[ρα]-πάς* or *θύ[ρα]-πός-σ[ιλφιον]*, with cumulative spelling of the final -s. The word following *τύπος* is usually the genitive of the name of an official, or of the name of a class of produce, which is often designated as *γείος*, "native," or *ἐνέτος* "imported."

The paper will be published in full in the Flügel Memorial Volume by Stanford University.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

WILLIAM N. BATES, *Editor*

220, St. Mark's Square, Philadelphia, Pa.

GENERAL AND MISCELLANEOUS

IM BAULICHT.—A Gallo-Roman Tumulus.—In *R. Élt. Anc.* XVII, 1915, pp. 277-280, E. and R. MALGET report that in 1912 a Gallo-Roman tumulus was found at Im Baulicht, Luxemburg. During the excavations many minor antiquities came to light including numerous vase fragments with the names of potters upon them, a bronze head of a ram, and many fragments of bronze vessels. No coins were found, but the mound probably dates from the end of the first century A.D.

NECROLOGY.—J. R. Aspelin.—The State Archaeologist, J. R. Aspelin, born at Hurinki in 1842, died at Helsingfors May 29, 1915. He was honorary president of the Archaeological Society of Finland. His chief work is on the Antiquities of the Finno-Ugrian North (1877-1884). (*S. R., R. Arch.*, fifth series, II, 1915, p. 75.)

Giovanni Baracco.—Giovanni Baracco, a member of the Commissione Archaeologica Comunale di Roma since 1883, died Jan. 14, 1914, aged 85. It was he who presented the Museo Baracco to the city of Rome. (*B. Com. Rom.* XLII, 1914, p. 232.)

Augusto Castellani.—Augusto Castellani, who died January 24, 1914, at the age of 85 years, was the son of the famous goldsmith Fortunato Pio Castellani, whose business he continued. He formed a fine collection of ancient jewelry. He discussed the technique of ancient goldsmith's work in several monographs, chief of which is *Della Oreficeria italiana*. He was conservator of the municipal collection of the Capitoline, and one of the first and most active members of the archaeological commission of Rome, founded in 1872. (*S. R., R. Arch.*, fifth series, II, 1915, p. 75, from *B. Com. Rom.* 1914, p. 234.)

Giuseppe Gatti.—The secretary of the archaeological commission of Rome, Giuseppe Gatti, was born November 23, 1838, and died at Rome, September

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Mr. L. D. CASKEY, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor CHARLES R. MOREY, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Mr. JOHN SHAPLEY, Professor A. L. WHEELER, and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1915.

For an explanation of the abbreviations, see pp. 123-124.

2, 1914. He was especially versed in Christian epigraphy. He was the author of 125 articles, collaborated in several volumes of the *C.I.L.*, had been director of the excavations in Rome, of the new National Museum, and of the *Bullettino Comunale*. (S. R., *R. Arch.*, fifth series, II, 1915, p. 76.)

A. E. H. Goekoop.—The generous giver of funds for the excavations at Ithaca and Tiryns, A. E. H. Goekoop, died at the Hague in the autumn of 1914. He was the author of a work on the Ithaca of Homer, which he believed to be the southern part of Cephallenia. He was not a scholar, but the friend and helper of science. (S. R., *R. Arch.*, fifth series, II, 1915, p. 76.)

Hermann Heineken.—Herman Heineken, a young numismatist of great promise, has been killed in battle on the German side (September 9, 1915). He is commemorated by J. MENADIER in *Z. Num.* XXXII, 1915, pp. 174–178. A similar fate has befallen **Max L. Strack** (November 10, 1914). His biography is written briefly by KURT REGLING (*ibid.* pp. 179–181), who also eulogizes **Karl Menadier** (died December 9, 1914, of typhoid contracted in service in the German army) in the same issue, pp. 182 f.

G. Leroux.—On June 9, 1915, Gabriel Leroux was killed in battle at the Dardanelles. He was born at Lyons, February 3, 1879, and, after studying at the École Normale Supérieure and in Paris, was for four years a student at the French School in Athens. He took part in the excavations at Delos where he made a special study of the Hypostyle Hall and published that building (*La Salle hypostyle*) in the official report of the excavations. Other works are a catalogue of the Greek and Italo-Greek vases in the museum at Madrid (1912); *Les origines de l'édifice hypostyle en Grèce, en Orient, et chez les Romains* (1913); and *Lagynos* (1913). In 1913 he became a member of the Faculté des Lettres of the University of Bordeaux. By his death France has lost one of her most promising young archaeologists. (P. MASQUERAY and G. RADET, *R. Ét. Anc.* XVII, 1915, pp. 294–298; also M. COLLIGNON, *R. Arch.*, fifth series, II, 1915, p. 73.)

Jean Maspero.—Jean Maspero, the son of the great Egyptologist, was killed February 18, 1915, aged 28 years. His special field of work was Egypt in Byzantine times, and in this field he had already achieved distinction. (S. R., *R. Arch.*, fifth series, I, 1915, p. 178.)

P. N. Papageorgiou.—The distinguished Greek philologist, palaeographer, and epigraphist, P. N. Papageorgiou, died in January, 1914. He was born at Salonica in 1859. (S. R., *R. Arch.*, fifth series, II, 1915, p. 240.)

Gian Giacomo Porro.—Dr. Gian Giacomo Porro was killed in battle, August 28, 1915. He was born in Turin, January 11, 1887, and graduated from the University of Turin in 1909. He was the son of the astronomer, Francesco Porro. In 1911 he joined the Italian archaeological school at Athens, took part in the excavations at Gortyna, and in the exploration of the islands of Rhodes, Syme and Cos. In 1914 he went to Cyrene on an archaeological mission, and on his return was made inspector at the museum at Cagliari. He assisted Taramelli in the exploration of the grotto of S. Michale at Ozieri. He had published thirteen articles. (*Cronaca delle Belle Arti*, II, 1915, pp. 70–72; fig.)

Clon Stephanos.—The first director (1886–1913) of the anthropological museum of the University of Athens, Clon Stephanos, died at Athens, January 24, 1915, aged 60 years. In 1874 he published a memoir on the antiquities and inscriptions of Syra, and in 1884 a work on Greece from the natural, ethno-

graphic, anthropological, demographic, and medical points of view. From 1903 to 1910 he was in charge of researches among the prehistoric remains in the Cyclades. His special interest was somatic anthropology. (S. R., *R. Arch.*, fifth series, I, 1915, p. 180.)

Rudolf Weil.—Rudolf Weil (died November 7, 1914) is commemorated by H. DRESSEL in a biographical notice in *Z. Num.* XXXII, 1915, pp. 168–170, immediately following two obituaries written by WEIL himself on Antonino Salinas (died March 12, 1914) and Barclay Vincent Head (died June 12, 1914).

EGYPT

THE ITALIAN EXPEDITION OF 1909–1914.—During the years 1909–1914 the Italian expedition to Egypt carried on excavations in the cemetery at Assiut where it had worked in previous years, explored two cemeteries and the fort at Ghebelain, south of Thebes, and began the exploration of the cemetery at Assuan. At Ghebelain the fort is in the main Ptolemaic, although part of it goes back to the twenty-second dynasty. The temple of Hathor was found to be very ancient, going back to the beginnings of Egyptian history. Many inscriptions from the third dynasty to Roman times were unearthed. The cemetery containing tombs from prehistoric times to the sixth dynasty was partly excavated. Many tombs were intact. The cemetery of the eleventh to the seventeenth dynasty yielded many fine vases. Other tombs dating from the first to the tenth dynasty were also opened. At Assiut antiquities of various periods came to light, but most of them from the sixth to the twelfth dynasty. At Assuan the most notable discovery was the tomb of Hikab on the island of Elephantine. It was adorned with beautiful painted reliefs, has a large hall and a magnificent stairway, one hundred metres long and four wide, running from the Nile to the tomb. Many of the antiquities brought to light by the expedition have been deposited in the museum at Turin. (*Cronaca delle Belle Arti*, I, 1914, pp. 92–93.)

GIZEH AND MEMPHIS.—The Expedition of the University of Pennsylvania.—In the *Museum Journal* of the Museum of the University of Pennsylvania, VI, 1915, pp. 63–84, is a brief report of its Egyptian expedition. In the spring of 1915 C. S. Fisher, by a special arrangement with the authorities of the Boston Museum of Fine Arts, carried on excavations for six weeks in their concession in the pyramid field at **Gizeh**. Several tombs were opened. The most interesting discovery was an offering-chamber of mud brick with a ribbed vault made of bricks with interlocking joints. This is not later than the sixth dynasty. Another discovery was an offering-table having around its edges two rows of hieroglyphs in which appear the names of the kings Khufu, Khafra and Dedefra. The expedition obtained a concession at **Memphis** and began excavations on what is supposed to be the site of the royal palace under the New Empire. Columns covered with inscriptions, and other parts of what was evidently a large building, have so far been uncovered.

KERMA.—The Excavations of the Boston Expedition.—In *B. Mus. F. A.* XIII, 1915, pp. 71–83 (17 figs.), G. A. R(EISNER) reports that an examination of the bones has proved that in the burials of the Hyksos period (see *A. J. A.* XVIII, p. 387) the chiefs were Egyptians and the sacrificed slaves, Nubians. During the Middle Empire Dongola was an Egyptian province, and the three

great mounds known as Mounds III, IV, and X were found to be the grave tumuli of Egyptian governors of the Sudan. This is a type of grave hitherto unknown in Egypt. The first two mounds date from the twelfth dynasty, and the third from the thirteenth. Mound III was the tomb of the prince Hepzefa, whose great rock-cut tomb at Assiut is well known. The reason for the contracts requiring the priests to make offerings to his statue is now clear. A statue of his wife Sennuwi, and the base of a statue of himself were found in the mound. The tomb was constructed thus:—A low circle of mud brick 10 cm. high and having a diameter of 80 to 90 m. was first built. Then two parallel walls were run across the circle from east to west making a corridor two or three metres wide (Fig. 1). Cross walls ran out to the circumference.



FIGURE 1.—TOMB OF PRINCE HEPZEFA.

The burial chamber lay on the south side of the corridor, roofed over with mud brick. After a feast, for which more than one thousand oxen were sacrificed, the body of the prince was buried and then between two and three hundred Nubians, men, women and children, driven into the corridor and either buried alive or strangled first and then buried. After the earth was filled in a floor of mud brick was laid over the whole mound, and a quartzite pyramidon and perhaps a chapel erected upon it. Almost immediately the place became a cemetery, the graves being sunk through the pavement. In Mound X the base of a statue of King Ra-khuw-tauwi, of the thirteenth dynasty, was found. This is the last of the great mounds, although there are fifteen or twenty others of smaller size. North of the mounds was a large cemetery in which about sixty Nubian graves were excavated. All show the same barbaric method of burial with the body placed on a bed. Most of

the objects found in the graves are of local manufacture, though a few are Egyptian, or imitations of Egyptian work. The great development of the arts in Nubia during the Middle Empire must have been due to the presence of Egyptian artisans. The pottery of Kerma is the finest ever made in Egypt. Several hundred fragments of statues carved by Egyptian sculptors of local materials were discovered; also inscriptions in Egyptian hieroglyphics; nineteen different kinds of pottery in 293 different forms; scarabs of steatite with blue or green glaze; and scaraboid, oval, and square seals, usually of ivory. A most remarkable scarab was a large blue-glazed stone set in gold, with a human head and rows of minute flies across the back. Among the objects of bronze were swords, daggers, knives, mirrors, razors in wooden cases, tweezers, awls, needles, etc. The swords differ from those in use in Egypt. Some of them were 60 cm. long, with a tortoise-shell or wooden grip and a long, flat ivory hilt. They were carried in rawhide scabbards over the shoulder. The wooden objects found include beds with ivory inlays, stools, throwing-sticks, etc. Among the inlays are seen the two-horned rhinoceros, and the ant-bear, never represented in ancient Egypt. Many stone vessels came to light, and vessels, mace-heads, tiles, etc., of faience. The decorations on the faience were line drawings, but in one case the background was filled in with black. Mica ornaments were used on the leather caps of the women. Gold was abundantly used, and heavy gold rims were put on bronze and even on pottery bowls.

THEADELPHIA.—*The Temple of Pnepheros.*—In *R. Arch.*, fifth series, I, 1915, pp. 181–188, the report of E. BRECCIA, director of the museum at Alexandria, on the progress of the museum in 1913, is reprinted. It is devoted chiefly to a description of the ruins at Theadelphia (Batn Herith), where a temple dedicated to Pnepheros was excavated. Pylons, courts, a large altar, and a number of frescoes were laid bare. The temple was flourishing in 137 B.C. and in 163 A.D., as inscriptions prove. Its prosperity seems to have decreased gradually until the worship of Pnepheros ceased. Some lesser antiquities were found in neighboring houses, but the harvest of papyri was disappointing. Excavations in the necropolis at Hadra produced vases of the Hadra type and some other objects. The museum has been enriched by several acquisitions, for the most part found at Alexandria.

THEBES.—*The Work of the Expedition of the Metropolitan Museum in 1914–1915.*—During the season of 1914–1915 the expedition of the Metropolitan Museum to Egypt did no work at the pyramid of Lisht, but carried on excavations on the site of the palace of Amenhotep III at Thebes, and cleared out and mapped several tombs near Sheikh Abd el Kurneh. In *B. Metr. Mus.* X, 1915, pp. 228–236 (6 figs.), N. DE G. DAVIES describes his work at the tombs. In the tomb of Surer (No. 48 in Gardner and Weigall's *Catalogue*), who was scribe, chamberlain and fan-bearer of Amenhotep III, many written fragments were found including a leaf of papyrus dealing with the sale of a slave girl; also a well-preserved relief of Amenhotep III enthroned; and the upper part of a statue which probably represents Thothmes IV. The tomb of Puimre (No. 39) was nearly cleared, but new shafts and chambers were found opening out in every direction. Far below the surface two large rooms were found to be knee-deep in remains of bodies which had been torn apart. The tombs of Userhet (No. 51) and of Thothemhab (No. 45) were completely cleared and plans of them made. In the tomb of Nakht (No. 52) a fine painted

statuette of the owner (40 cm. high) was found, but this was afterwards lost in the sinking of the *Arabic* off the coast of Ireland. In addition, plans, tracings, etc., were made in whole or in part of tombs 181, 51, 93, 75, 60, 217 and 48. *Ibid.* pp. 253-256 (4 figs.) H. G. EVELYN-WHITE reports that he cleared three tombs on the hill known as El Khokheh, one dating from the Middle Kingdom, one from the time of Osorkon II, and the third, the tomb of Ta-nefer, from the eighteenth or nineteenth dynasty. At the palace of Amenhotep III work was carried on to the north of the area already excavated, and a large, rectangular building uncovered. The scheme of a bedroom, robing-room, bath and wardrobe rooms closely associated with a throne-room is typical of all the royal apartments. It is probable that this building was occupied either by Queen Tiy, or by the heir-apparent, Amenhotep IV.

The Excavations at the Monastery of Epiphanius.—In 1913-1914 the excavations of the Metropolitan Museum of New York at the Monastery of Epiphanius near Thebes were completed. Many objects illustrating the life of the monks were brought to light, including hundreds of letters on ostraca and papyrus. The monastery was founded at the beginning of the seventh century. (H. E. W., *B. Metr. Mus. X*, 1915, pp. 138-150; 10 figs.)

ASIA MINOR

RHODES.—Explorations.—In *Boll. Arte*, VIII, 1914, pp. 219-242 (26 figs.), L. PERNIER publishes an account of recent explorations in the island of Rhodes. On the acropolis at Ialysus, a Corinthian capital, drums of columns and large pieces of stone indicate the site of a large building. Near Villanova a group of tombs containing early vases was found by a peasant. On the acropolis of Camirus a fragment of an inscription similar to *I.G.I. I*, 695, preserves part of the name Κρητινάδαι. The words τῶν κατὰ τὸν σεισμόν τελευτασάντων found on an altar refer to the earthquake of 222 B.C. The presence of many tombs was noted. At Leros or Lelos were found tombs and a small piece of the citadel wall of good Greek period. Marmuralia and Hagios Phokàs formed the citadel of a Greek city. Many ancient fragments lie scattered about between them. Both have well-preserved pieces of the citadel wall. At Vasilika a piece of wall was observed and the site of a large necropolis noted. *Ibid.* IX, 1915, pp. 283-300 (11 figs.), G. G. PORRO reports that efforts were made by the Italian expedition in Rhodes to find positive evidence for the site of the ancient Camirus, but without success. Tombs were found in all directions, including fifteen chamber tombs at Kekhragi, and a dromos tomb at Kaminaki Lures. Fragments of large pithoi were found in several places, many of them decorated with maeander and spiral patterns. An owl-faced statuette of terra-cotta, numerous vase fragments, and thirty-five inscriptions were also discovered.

GREECE

ATHENS.—The Work of the French School in 1913-14.—During the year 1913-14 members of the French School at Athens made several tours in Epirus and Macedonia recording inscriptions and noting sites worthy of excavation. At Dium were found remains of a street, a Doric temple, an agora surrounded by colonnades, and a theatre. In Chalcidice inscriptions and unpublished

reliefs were discovered. At **Delphi** M. Courby carried on excavations inside the temple with a view to determining the interior arrangement. He has also attempted a restoration of the east front. M. Blum has proved among other things the correctness of Bourguet's suggestion that on a terrace of the same level as that of the tripod of Plataea there was a colonnade erected by Attalus. Another building of the same date was situated on the road running along the south terrace. Its purpose has not been determined. A study was also made of a building of fourth century date at the west of the temple, and of the heroon of Pylaea dating from the first or second century A.D. At **Delos** work was carried on especially near the Cynthian hill. A plan of Delos on the scale of 1/1000 has been begun. Besides the work at Thasos already reported the site of **Philippi** was examined. Traces of the theatre, which was larger than the one at Athens, were found; also numerous small, rock-cut sanctuaries which yielded many reliefs and inscriptions; and a large building which may have been a temple. Less important were an altar dedicated to Isis, a long and interesting Christian inscription, a broken statue of an emperor in armor, terra-cotta figurines, etc. C. Avezou has written an elaborate work on the gymnastic establishments at Delos. The students at the School in Rome have been interested chiefly in mediaeval subjects; Jean Martin, who was making a special study of the earliest remains in Sicily, was killed in battle. (E. POTTIER, *C. R. Acad. Insc.* 1915, pp. 53-72.)

ATSIPADA.—Children's Graves.—In 'Αρχ. 'Εφ. 1915, pp. 48-50 (3 figs.), E. N. PETROULAKIS describes a children's cemetery he discovered near Atsipada (Crete), in which the children are buried in vases belonging to the period of transition between the Mycenaean and the Geometric periods. In each large vase was also a smaller one.

AXOS.—Recent Discoveries.—In 'Αρχ. 'Εφ. 1915, pp. 43-48 (5 figs.), E. N. PETROULAKIS publishes a late Roman votive relief representing Demeter, and a large number of terra-cotta figurines, found at Axos (Crete), and evidently coming from a sanctuary of Demeter which awaits excavation.

PHAESTUS.—Two Tholos Tombs.—In *Ausonia*, VIII, 1913 (published 1915), Scavi, cols. 13-32 (26 figs.), R. PARIBENI reports upon the excavation of two tholos tombs southwest of the modern village of Siva, near Phaestus. They are not quite circular, but have an approximate diameter of 5.70 m. and 4.58 m. respectively. Their walls, built of stones of moderate size, are preserved in places to a height of one meter. Between the two tombs was an intrusive burial, and another near the entrance to the southern tomb. Both of the tholos tombs were plundered in antiquity; but in the southern of the two fifty-three objects of various kinds were found, and fifteen more in the northern. They consist of vessels and other antiquities of stone and of terra-cotta, bronze dagger blades, seals, the head and chest of a small figure of ivory of rude workmanship, etc. The intrusive burials yielded about a dozen other small objects. The tombs appear to date from the period of Early Minoan III. The bodies in them were not burned.

RETHYMNA.—Miscellaneous Antiquities.—In 'Αρχ. 'Εφ. 1915, pp. 51 f. (4 figs.), E. N. PETROULAKIS publishes antiquities in the museum of Rethymna (Crete): three small aediculae, each with two niches for painted tablets; a late grave stone; a piece of lead water pipe with the inscription Σολήνες

Δούρωνος; a Latin elegiac epitaph in memory of a certain Civranus, perhaps the governor of Rethymna who died in 1616 A.D.

TYLISSUS.—The Excavations.—In *Ausonia*, VIII, 1913 (published 1915), pp. 76-89 (pl.; 16 figs.), J. HAZZIDAKIS gives a general account of the excavations at Tylissus, eight miles west of Cnossus. Three large houses have been uncovered (Fig. 2). The largest has twenty-two rooms; the second, which

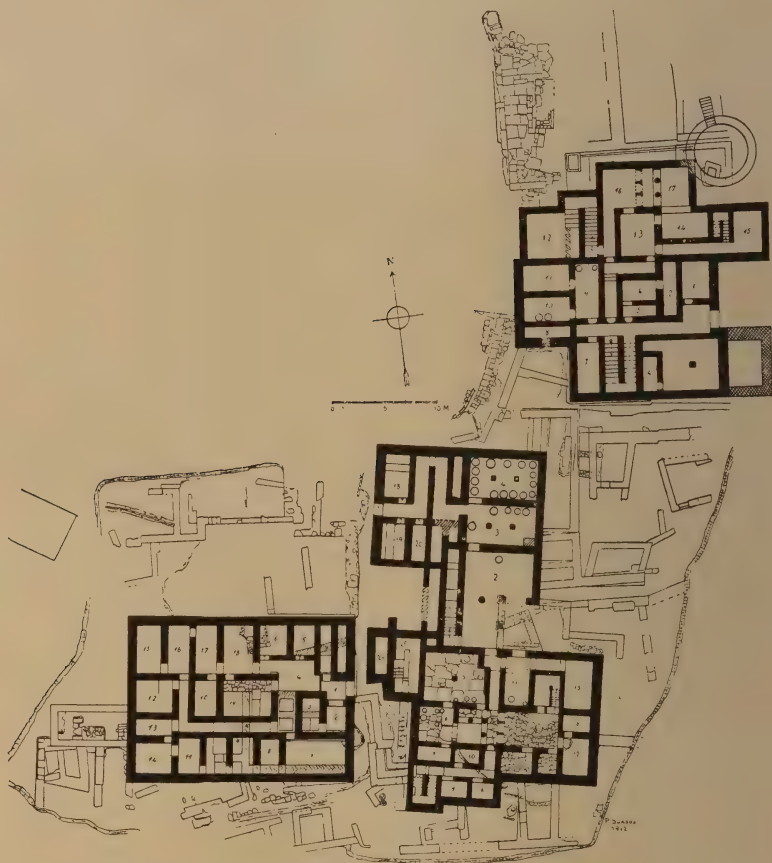


FIGURE 2.—TYLISSUS; PLAN OF THE EXCAVATIONS

lies immediately west of it, has twenty rooms; and the third, a short distance to the northeast, seventeen. In the first house the rooms are paved with slabs of irregular shape except in places where the natural rock was leveled off to take the place of pavement. There are corridors as in other Minoan buildings, also square pillars which once supported the second story, and numerous large *pithei* standing in the storerooms (Fig. 3). This house has four stairways three of which led up to the second story, while the third led down to a small

room or shrine. Beneath the large court are remains of earlier walls. In the house to the northeast the walls are standing in places to a height of 2 m. The north wall consists of large blocks very carefully laid in regular courses. One of the stairways in this house has all of its eight steps in place, another has ten steps, and a third eleven steps of one flight and five of another. This house was destroyed by fire after it had been pillaged. The most interesting object of bronze found in the excavations was the statuette of a man shading his eyes with his right hand. There were also found four caldrons of bronze, the largest having a diameter of 1.4 m., and a bronze "talent" weighing 26.905 kg. Among the *pithoi*, which were numerous, was one with a bull's head upon it. Many vases were found, including some good examples of the "Palace" style. Among the votive objects were "horns of consecration," a primitive



FIGURE 3.—TYLISSUS; HOUSE WALLS AND PITHOI

bull's head, a small male figure with Minoan letters incised upon it, a primitive female head, a late Minoan figure, and what appears to be a woman's dress of terra-cotta. The fifth century inscription written in Argive characters (see *A.J.A.* XIX, p. 349) was found 45 cm. above the débris which marks the end of the Late Minoan period. The level of Late Minoan I and Middle Minoan III is 2 m. below this. In a few places below this level were found vases of Middle Minoan I, and of earlier date. Except for a few tiny fragments vases of the Kamares style have not yet been found at Tylissus.

ITALY

BEVAGNA.—A Roman Mosaic.—The large Roman mosaic found at Bevagna has been carefully excavated and cared for and will be preserved in

situ. It represents a life-size Neptune surrounded by dolphins, sea-horses, fish and other marine animals. (*Cronaca delle Belle Arti*, I, 1914, p. 94.)

CAGLIERI.—The Gouin Collection of Sardinian Antiquities.—In *Boll. Arte*, VIII, 1914, pp. 251–272 (32 figs.), A. TARAMELLI describes an important collection of Sardinian antiquities recently acquired by the museum at Cagliari. It was made during a period of thirty years by Leone Gouin who died in 1888. The civilization of the period of the nuraghi is abundantly represented by pickaxes, axes, lances, knives and a saw, all of bronze; by bronze figurines, among which is a warrior with four eyes and four hands holding two swords and two shields; and by figurines of terra-cotta. There are several pieces of Carthaginian sculpture, probably from Tharros. The collection also includes necklaces, scarabs and seals; toilet articles in ivory, bone, silver and bronze;



FIGURE 4.—RELIEF FROM LECCE

some Southern Italian and Roman vases; Roman bronzes; and many hundreds of vases, especially those dating from prehistoric times from the grottoes of S. Lucia and S. Orreri. Among the terra-cottas is a large bust of Astarte with elaborate head-dress.

CASTEL PORZIANO.—A Large Mosaic.—In 1910 a large villa of the time of Severus was discovered near Castel Porziano and partly excavated. Many rooms were decorated with mosaics. A well-preserved quadriporticus with a fish pond in the middle had a mosaic floor with representations of hunting scenes, Nereids and Tritons receiving the armor of Achilles, sea monsters and wild animals. This mosaic, which covers about 350 square metres, has been removed to the National Museum at Rome. (*Cronaca delle Belle Arti*, II, 1915, p. 41.)

LECCE.—A Tomb with Sculptured Reliefs.—In 1912 there was discovered in the garden of the Palazzo Palmieri at Lecce (the ancient Rudiae) a large

tomb cut in the native rock. A stairway of sixteen steps leads down to a rectangular space on three sides of which chambers open. On both sides of the doorways are half-columns hewn in the rock, the capitals adorned with Ionic volutes and foliage. Over one of the doors is the Messapian word $\Lambda\Lambda\text{ZENAC}\Gamma\text{OP}$ scratched more or less carefully four times. On each side of the stairway, on a level with the third stair from the top, and equal in height to two stairs, is a frieze. On one side this frieze is 0.30 m. high and 3.17 m. long and represents a combat between horsemen and warriors on foot (Fig. 4). The figures are in high relief and are carved with much spirit. The other frieze is 0.30 m. high and 3.26 m. long and consists of floral decorations. The tomb dates from the end of the fourth or beginning of the third century B.C. Graffiti on the walls show that the tomb was probably used as a cellar in the seventeenth century. (G. BENDINELLI, *Ausonia*, VIII, 1913, pp. 7-26; pl.; 8 figs.)

OSIMO.—Gallic Tombs.—Several Gallic tombs, some with rich furnishings, have recently been found at Osimo. In one was a diadem consisting of a gold band with discs and acorns of terra-cotta covered with gold foil attached. All the objects have been placed in the museum at Ancona. (*Cronaca delle Belle Arti*, I, 1914, pp. 87-88.)

PIEDMONT.—Excavations 1909-1914.—In *Cronaca delle Belle Arti*, I, 1914, p. 92, a brief account is given of the excavations in Piedmont during the five years ending in 1914. Work was carried on at Industria, Libarna, Piccolo San Bernardo, Ventimiglia and Aosta.

ROME.—Discoveries in 1914.—In *B. Com. Rom.* XLII, 1914, pp. 196-214, L. CANTARELLI notes that the most important discoveries made in Rome in 1914 were two female statues found near the Via Venti Settembre, and a number of inscriptions, including one in verse. *Ibid.* pp. 215-217 he calls attention to an inscription of a certain Bassus, *procurator* under Hadrian, found at Ventimiglia; and, *ibid.* pp. 221-222, to another found at Palestrina reading,

C. SAVFEIO · C · F ·
SABINI
C. ORCEVIO · M · F
////////// I
CENSORES
HASCEARAS
ΓROBAVERONT
IVNO · ΓALOSTCA
RIA

It dates from about 100 B.C.

Excavations in the Forum and on the Palatine.—A brief report of the excavations carried on in the Forum and on the Palatine during the five years ending with 1914 is published in *Cronaca delle Belle Arti*, I, 1914, pp. 73-74. These include the house of the republican period in the Summa Sacra Via; the *horrea* of imperial times near the Sacra Via; the Basilica Aemilia; the systematic exploration of the house of Livia; and the house of the Flavii. Many fragments of sculpture and vases, and terra-cotta figurines were found on the different sites.

Recent Discoveries in the Mithraeum beneath Saint Clement's Church.—In *C.R. Acad. Insc.* 1915, pp. 203-211 (3 figs.), F. CUMONT reports upon re-

cent archaeological work in the cellar of the church of Saint Clement at Rome. This church rests upon the foundations of a temple of Mithra built at some unknown date in a large house of the time of Augustus. After much trouble water was diverted from the site which is now dry and open to inspection. Part of a heavy wall belonging to the republican period can now be seen. Recent discoveries include a fountain which stood before the temple; numerous remains of animals, especially of wild boars; and part of the altar discovered in 1859. It is inscribed CN. ARRIVS. CLAVDIANVS | PATER POSUIT. and dates from the end of the second century A.D. The head of a solar deity found in 1869 is of the same date.

Remains of a Marble Building in the Viale del Re.—On the right of the Viale del Re shortly before it reaches the old station of Trastevere various architectural fragments were found 6 m. below the modern level. They belonged to a small marble building with columns and entablature. Enough remains to permit a restoration in the National Museum to which the fragments have been removed. (*Cronaca delle Belle Arti*, II, 1915, p. 39.)

A Small Building in the Viale del Re.—In September, 1914, a small building was found in the Viale del Re. It consisted of a room 2.25 m. long and 2.38 m. wide, and at one end a semicircular niche decorated with shells in stucco and surmounted by a pediment of brick. Below the level of the niche, built into a wall, was an inscription mentioning a fountain and the name of Vespasian. (*Cronaca delle Belle Arti*, II, 1915, p. 39.)

The Horrea Seiana.—Excavations near the Monte Testaccio have uncovered parts of the ancient Horrea Seiana. A hoard of 885 coins dating from Antoninus Pius to Gallienus and Salonina was found. (*Cronaca delle Belle Arti*, II, 1915, p. 39.)

Remains of Five Aqueducts.—In the autumn of 1912, in opening a new street between the square of the Porta Maggiore and the new railway station, remains of five aqueducts were found, two with subterranean *specus*. One is the Anio Vetus, another the Aqua Appia-Augusta, another probably the Aqua Claudia, another the combined Julia, Tepula and Marcia, and the fifth the Anio Novus. (*Cronaca delle Belle Arti*, II, 1915, p. 38.)

A New Fragment of the Arval Inscription.—In *B. Com. Rom.* XLII, 1914, pp. 34–40, O. MARUCCHI makes a preliminary announcement of the discovery of an important fragment of the Arval inscription. It was found in the autumn of 1914 in the course of systematic excavations in the lower basilica of S. Crisogono in Trastevere. The marble is 0.60 m. broad, 0.50 m. high, and 0.06 m. thick. The writing is bad and contains many abbreviations, ligatures, and oddly shaped letters. Its date is 240 A.D. (Gordian III). Two columns of text, each of forty lines, and a portion of a third, are extant. They contain part of the ceremony of the announcement of the festival of Dea Dia, a description of the *sacrificium piaculare* on the 31st of March in the grove of Dea Dia on the Via Campana, the ceremony performed at the coöptation of new members, the ritual for the festival of Dea Dia, etc.—a fuller account is soon to appear in *Not. Scav. Ibid.* pp. 317–321, FRANCESCO FORNARI discusses the rite of the *cena* given to the Mater Larum which is mentioned in this inscription. He thinks that it was apotropaic and that the Mater Larum was a goddess concerned with the dead.

Statues of Hygieia and Asclepius.—In *B. Com. Rom.* XLII, 1914, pp. 3–12

(2 pls.), LUCIO MARIANI describes the torsos of two life-size statues of Parian marble found in 1914, in the course of building operations in the area of the former Piombino palace on the piazza Colonna. The first, a Hygieia, without head and hands, but showing traces of the serpent on the right arm, is a Roman copy of an original of the third or fourth century B.C., perhaps one of the Pergamene group of Asclepius and Hygieia by Phyromachus. Its companion piece, an Asclepius, is without the head and right arm. The left hand rests on the hip; there are traces of the staff under the left arm-pit, also some traces of the serpent are still to be seen. It is a Roman copy of a well-known type of the fifth century usually attributed to Alcamenes. No Pergamene influence is traceable. The execution seems to indicate a bronze original. *Ibid.* pp. 12-24, RODOLFO LANCIANI shows that these statues were found buried five metres above the ancient surface. They were, therefore, buried in modern times. They probably belonged to the collection of Cosimo Giustini, *ca.* 1600.

Female Statues.—In 1905 a headless female statue of life size was found between the Via Servio Tullio and the Via di Porta Salaria. Recently a similar statue has been unearthed in the same place. The *Senaculum Mulierum* of the time of Aurelian was in that vicinity, and the statues may have had something to do with it. The neighborhood will be further explored. (*Cronaca delle Belle Arti*, II, 1915, p. 38.)

A Reference to the Auguria Maxima and Minima.—Excavations in the Via Marforio to give more space about the monument of Victor Emanuel II brought to light an inscription mentioning the *auguria maxima* and *minima*. (*Cronaca delle Belle Arti*, II, 1915, p. 39.)

A Stamp.—In the wall bounding the Horrea Agrippiana from the side of the Atrium Caii was found twice the stamp, *M(arci) Publici Sed(ati) Teg(ula) Ton(neiana)* (cf. *C.I.L.* XVI, No. 637). It is to be dated *ca.* 100 A.D. (*B. Com. Rom.* XLII, 1914, p. 33.)

Acquisitions of the National Museum in 1913.—In *Boll. Arte*, VIII, 1914, pp. 278-287 (6 figs.), R. PARIBENI reports that during the year 1913 there were added to the collections in the Museo Nazionale Romano 1,092 objects. The more important are (1) a life-size nude Apollo, with the left arm broken off at the elbow; (2) an archaistic, headless draped female figure of life size; (3) the Ephebus of Sutri (*Not. Scav.* 1912, p. 273); (4) a relief in black marble (1.04 m. long and 0.56 m. high) with a centaur and a Heracles in panels and an ornamental border of foliage and tiny cupids above; (5) portrait head of Trajan of basalt; (6) part of a relief representing a male head crowned with the sun's rays, and in the background a smaller head and stars, probably to be referred to an oriental cult of the Sun. Many coins were also acquired. In *Cronaca delle Belle Arti*, I, 1914, pp. 75-78 there is an account of the changes in recent years in the Museo Nazionale Romano and the various acquisitions. These include thirty-five pieces of sculpture. The price paid for each is noted.

Acquisitions of the Prehistoric and Ethnographic Museum.—In *Cronaca delle Belle Arti*, I, 1914, pp. 78-79, is given a brief account of the acquisitions of the Museo Preistorico-Etnografico for the years 1909-1912.

SARDINIA.—Excavations in Recent Years.—In *Cronaca delle Belle Arti*, I, 1914, pp. 81-84, A. TARAMELLI publishes a brief account of the excavations carried on in Sardinia in recent years, ending with the year 1914.

SYRACUSE.—Acquisition of Coins.—During the year 1913–1914 the museum at Syracuse acquired 65 Sicilian Greek coins, 2 Carthaginian, 155 Roman and 13 from Magna Graecia, besides Byzantine and mediaeval coins. Among the more important pieces are a fine Syracusan medallion of Euaenetus, some tetradrachms of the period of transition, probably to be referred to Eumenes, and a rare Catanian tetradrachm of Euaenetus. A hoard of 151 consular denarii was also acquired, as were 60 gold soldi of Marcian, Anastasius, Justin I, Leo II, Zeno, and Basil. Among the mediaeval coins was a very rare Messenian gold ducat of Peter of Aragon and Costanza, and another of Ferdinand the Catholic. (*Cronaca delle Belle Arti*, I, 1914, pp. 62–63.)

TARANTO.—Recent Acquisitions of the Museum.—The museum at Taranto has acquired the fine Hellenistic herm of a bearded Dionysus recently excavated in that city, as well as five large pieces of Roman mosaic. (*Cronaca delle Belle Arti*, II, 1915, p. 52.)

SPAIN

BALEARIC ISLES.—Pre-Roman Remains.—In the spring of 1911 A. MAYR made an archaeological tour of the islands of Mallorca and Menorca examining all the prehistoric remains. He has now published his results describing the monuments at the following sites in Mallorca: Son Noguera, Pedregar, Cape Corp Vell, Son Homs, Predio Son Joy, Sa Blanquera, Son Amoza, Predio Son Suredda Ric, Predio Bellver Ric, de Bandris, Predio Son Suredda Povre, es Rafel, Son Gruta, Porto Cristo, Cala Morlanda, El Rafalet, Lluccamar, Hospitalet, and Can Daniel. In Menorca remains at the following places are described: Trepuco, Curnia and Turo, Talati de Dalt, Binicalaf Vey, Torre d'en Gaumés, Torre Nova d'en Lozano, and Torre Llafuda. He also describes antiquities in stone and bronze, as well as pottery in the collections of Don Juan Amer in Manacor, and Don Jaime Planes in Palma. The purpose of the talayot is also briefly discussed. [*Über die vorrömischen Denkmäler der Balearen*. Von ALBERT MAYR. Munich, 1914, König. Bayerisch. Akad. 68 pp.; 13 pls.; 14 figs.]

MÉRIDA.—The Roman Theatre.—In *C. R. Acad. Insc.* 1915, pp. 164–174 (4 figs.), R. LANTIER gives an account of the Roman theatre at Mérida, describing in some detail the excavations carried on from 1910 to 1914. The structure extends 86 m. from east to west. Granite, concrete, brick and marble were all used in its construction. There were three tiers of seats, the first having twenty-four rows, the second five, and the third four rows. At each side of the orchestra was a large vaulted entrance above which were *tribunalia* or boxes. The excavations brought to light among other things part of the apparatus by which the curtain was raised and lowered. This consisted of small square conduits, varying from 30 cm. to 50 cm. square, driven 3 m. into the soil at intervals of about 3 m. along the whole length of the *pulpitum*. In them were probably set double tubes as at Timgad. Nothing remains of the stage. Behind it were rooms opening on the portico at the rear of the stage buildings. An inscription of Agrippa proves that the theatre dates from 16 B.C., but the stage buildings were rebuilt after a fire in 135 A.D., and again in the fifth century. The theatre was abandoned in the sixth century.

FRANCE

BOURGES.—A Gallo-Roman Grave Stele.—In *R. Ét. Anc.* XVII, 1915, pp. 275–276 (pl.), É. ESPÉRANDIEU publishes a Gallo-Roman grave stele recently found with others at Bourges. It is of a soft stone 0.47 m. high and has carved upon it the rude figure of a standing nude woman. It bears an inscription which the writer interprets as *N(umini) et Gl(oriae) Caesari(s); [C(aius)] Rufinius Adnam(etus), Africani f(ilius), d(onum), d(edit)*. The figure represents some local goddess. The stele may date from the end of the third century A.D.

GIRONDE.—Archaeological Discoveries.—In *R. Arch.*, fifth series, II, 1915, pp. 80–83, Dr. PEYNEAU describes various discoveries in the Gironde. At Mios, in a necropolis crossed by an ancient road, eight tumuli were opened. The calcined bones of the dead were contained in large urns. Arms and various objects for personal use and adornment were found. A fine axe of jadite was found about 200 m. from this necropolis. In an isolated tumulus was an urn containing calcined bones. A second necropolis, at Truc de Bourdiou, near Mios, consists of flat graves, not tumuli. The incineration is here less complete. The objects found are in part later than those found in the tumuli. The inhabitants of the place seem to have been largely potters and iron-workers. At Biganos about thirty tumuli were explored. Like those of Mios, they date from the first Iron Age. The urns were similar to those of Mios, but the general effect was poorer, and objects of iron were almost entirely wanting.

LAGARDY.—A Neolithic Settlement.—In *L'Homme préhistorique*, II, 1914, pp. 233–246 (2 figs.), M. SAGE describes a recently discovered neolithic settlement at Lagardy, Commune of Malemort, Vaucluse.

NÉRIS.—A Statuette of the God with a Wheel.—In *B. Soc. Ant. Fr.* 1915, pp. 100–104 (2 pls.), M. PROU publishes a terra-cotta statuette of the “god with the wheel” (Taranis?) found at Nérès (Allier). The head and lower parts of the legs are gone. In its right hand, which rests by its side, the figure holds a wheel. The type is a new one.

PARIS.—The Arena of Lutetia.—In *C. R. Acad. Insc.* 1915, pp. 195–203 (plan), Dr. CAPITAN points out that in 1914 the municipality of Paris acquired the site of the ancient arena of Lutetia. Excavations were carried on here in 1870 and 1871, and again in 1883, but the remains brought to light were afterwards covered up. They have now been uncovered again, and the excavations extended. The site will be kept open and be made into a public square. The amphitheatre of Lutetia probably dates from the time of Hadrian.

Acquisitions of the Louvre in 1914.—In *B. Soc. Ant. Fr.* 1914, pp. 302–305, A. HÉRON DE VILLEFOSSE and E. MICHON report the following acquisitions of the Louvre in 1914. 1. A portrait head of a Roman lady. 2. A draped female bust found at the Piræus in 1854 and dated by an inscription in the archonship of Philistides. 3. A colossal bearded head from Macedonia, dating from the time of the Antonines. 4. A large grave stele bearing a *loutrophoros* and inscribed *Φαλνιππος Αυσλου Κεφάληθεν*. 5 and 6. Byzantine reliefs. 7. A large bronze group of Eros and Psyche, from Rhodes. 8 and 9. Two armlets from Tiryns, one decorated with six griffins with helmeted human heads, the other with three zones of animals. 10. A girdle ornamented with three rows of

buttons in repoussé. 11. A large glass cup ornamented with leaves in relief. 12. A vase of white glass.

SAINT GERMAIN-EN-LAYE.—**Roman Tombs.**—In *R. Arch.*, fifth series, I, 1915, pp. 197–202 (10 figs.), B. CHAMPION reports the discovery of seven Gallo-Roman tombs near Saint Germain-en-laye. They were found in March, 1914, in the course of work carried on for other purposes in the property of Mr. MacAvoy. In the tombs were skeletons and objects of iron, clay, and glass, besides a few coins (one of Constantius Chlorus and one of Maximian). Further and more systematic excavations may take place at some later time.

GERMANY

BERLIN.—**Meetings of the Archaeological Society.**—The meetings of the Berlin Archaeological Society in January, February and March, 1915, are reported in *Arch. Anz.* 1915, cols. 50–57. The January meeting was devoted to a discussion of the architectural history of the ancient theatre, by E. Fiechter of Stuttgart, with reference to his recent book on the subject, and to replies from Dr. W. Doerpfeld and E. Bethe of Leipzig. At the February meeting M. Mayer of Leipzig, also referring to his book, *Apulien vor und während der Hellenisierung*, spoke on the pre-classic period of Apulian civilization, in which influences came, through sea-borne trade and later through colonization, both from the Adriatic coast of the Balkan peninsula and from the Aegean, suppressing or overlaying the native Siculan and Italic elements. The relation of Messapians and Iapygians, the peculiar costume of the region, and the abundant native pottery, of geometric style, were discussed, as well as the influence on pottery and other arts of the small, politically unimportant Greek immigration from Crete, Rhodes, Miletus, etc. G. Loeschke called attention to the similarity of early Apulian ceramic art to that of Cyprus in the Graeco-Phoenician period; and H. Schuchhardt to an apparent connection between the early Spanish, the Second Trojan, and the First Siculan periods. At the March meeting, P. Schubring, who is soon to bring out a book on the subject, discussed the use of classical myths on the Italian painted marriage chest of the Quattrocento. These chests, chiefly from Tuscany and other parts of northern Italy and often painted by famous masters, are mostly in private possession in England, France, America and Austria, as well as in Italy; but they show much more clearly than the madonnas and saints by which that century is chiefly represented in museums and galleries, the very intimate relation with the antique which the Italians felt and which constituted the real Renaissance in their country. Of 892 numbers in the catalogue of these pictures, 375 are from ancient legends, both Greek and Roman. They recall the stories of the *Iliad* and *Odyssey*, the Greek gods, the metamorphoses, the *Aeneid*, as well as the heroes and heroines of early Roman legend and even historical characters, Scipio, Caesar, Vespasian and others, down to the story of Antiochus I and Stratonice. The artists introduced these divine and human beings into surroundings of their own time and place, not from naïveté, but from a real conviction of their own historical descent as a people from the races and lands to which the tales belonged.

HESSEN.—**Recent Excavations.**—In *Berl. Phil. W.* October 2, 1915, cols. 1257–1264, G. WOLFF describes the excavations carried on during the last two

years at a station of the Roman *limes* on the Salisberg. He also records the discovery of pre-Roman roads in Kurhessen.

AUSTRIA-HUNGARY

BUDAPEST.—Acquisitions of the National Hungarian Museum in 1913.—A report of the addition made in 1913 to the archaeological section of the National Hungarian Museum is published by G. SUPKA in *Arch. Anz.* 1915, cols. 17–50 (22 figs.). The objects range from the palaeolithic stone implements of a race of men who lived about the site of Miskolcz, among cave-lions, wolves and hyenas, with horses and cattle, in a remote geological period reckoned as some 50,000 years ago, to an embossed silver bowl of Mohammedan art, with ostriches and the Moorish broken arch. Prehistoric are: weapons and ornaments of the earlier and later Bronze Age of Hungary, from Futtak and Matészalka, which show East-Asian influence; gold armlets and earrings from Transylvania, with suggestions of Mycenaean motives; and a fragmentary bronze chain of intricate design, with a tiny human figure as amulet, of the La Tène period. A lead tablet with religious symbols in relief—Magna Mater, Horseman, etc.—and two silver brooches of the La Tène period, about 150 B.C., are Dacian. To the first and second centuries A.D. belong the following small bronzes: a large lamp from Mór, having on the crescent-shaped handle a finely executed bust of Zeus, of the Otricoli type, and a bust of Helios to which a Selene was once pendent; a small bronze statuette of Athena with Corinthian helmet, adapted from a fifth century type of Core and Demeter, found in Carinthia; a rather roughly executed nude Aphrodite, from a good original from Wesprim; a dancing girl with fluttering robe and scarf, from Dunapentele; and a dancing Lar Augustus, with laurel chaplet, wide spreading skirts, and hands outstretched to hold rhyton and patera. A bronze lamp of the same period and two bronze oil flasks of about 200 A.D. have the Alexandrine motive of the negro or negroid head; and a rude urn of clay, of about the time of Constantine, has a barbaric human face moulded on one side. Some small bronze objects from the period of the migrations, found in the district of Tolna on the Danube, introduce an element of horse-shoe architecture which is Buddhistic-Indian and Central-Asian, and are probably relics of the Huns; while a pair of gold earrings with filigree work, from Kőtelek, represent the art of the Greek colonies on the Black Sea. Five small silver objects from the district of Zemplén are of the ninth-tenth centuries A.D. Two Byzantine silver reliefs of St. George and the Dragon illustrate a late development of the cavalier god or hero, in a series originating in the south-east corner of the Mediterranean, and including Bellerophon-Perseus and the Thracian Horseman, as well as an Iranian mounted divinity.

RUSSIA

VORONÉJE.—A Silver Vase with Reliefs.—In *R. Arch.*, fifth series, I, pp. 335 f. (2 figs.), S. REINACH publishes, from a publication of Mr. Rostovzev, three photographs of a silver vase found in 1910–1911 in a kourgan near Voronéje and now in Petrograd. On each side are two bearded Scythians in earnest conversation. This vase is a worthy pendant to the famous vase from Kul Oba (Reinach, *Repertoire des reliefs*, III, p. 498.).

GREAT BRITAIN

LONDON.—Precautions at the British Museum.—The Trustees of the British Museum have taken special steps to safeguard its treasures. The Elgin Room has been closed to the public; the pediment sculptures of the Parthenon, the Portland Vase, the Rosetta Stone, and other more precious objects have been removed to the basement. The Parthenon frieze, which is fixed to the walls with great security, has been protected by sandbags and anti-combustion material. (*J. B. Archit.* XXII, October 16, 1915, pp. 529—530.)

NORTHERN AFRICA

CYRENE.—A Statue of Alexander.—In *R. Arch.*, fifth series, I, 1915, p. 181 (fig.), S. R. gives a cut (from *Il Marzocco*, March 7, 1915) of a statue found by the Italians at Cyrene, in the *thermae* restored in the time of Hadrian. The figure is Polyclitan in proportions and attitude. The head resembles that of Alexander, but the whole is rather an ideal work than a portrait, perhaps originally one of the Dioscuri, with the *protome* of a horse beside him.

MARSA MATRŪḤ.—Semitic Remains.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 201–207 (5 pls.), O. BATES reports an archaeological survey of the district around Marsa Matrūḥ. This place, which lies about one hundred and fifty miles west of Alexandria, possesses a small port, and represents the ancient Praetorium, a foundation of Alexander the Great. In the Eastern lagoon is a small island, known among the Arabs of the vicinity as the Gezīrah-t el-Yahūdy. On the north end of the island was discovered the ground plan of a simple structure built of rough stones dry laid, and forming two rooms placed on a north and south axis. In the upper part of the filling of the chamber a number of sherds belonging to the “second Cypriote period” (1500–1200 B.C.) were discovered. These constitute the earliest Semitic remains yet found in North Africa, west of Egypt.

UNITED STATES

NEW YORK.—Recent Acquisitions of Classical Antiquities.—In *B. Metr. Mus.* X, 1915, pp. 122–124 (4 figs.), Miss G. M. A. R(ichter) notes the acquisition of five Greek vases by the Metropolitan Museum in 1914. 1. A black-figured hydria in the style of Execias is decorated with a scene of combat on the shoulder, and a marriage procession on the body of the vase. The letters H and HE suggest that the bridal pair are Hebe and Heracles. 2. A fragmentary cylix, inscribed Παντίος καλός, has on its interior the figure of an athlete and on the exterior a combat. 3. A red-figured crater dating from the first part of the fifth century has a representation of Heracles slaying Busiris. 4. The fourth vase is a small marriage vase (height 12.7 cm.) with scenes of the Epaulia. 5. The fifth is a bowl with a banquet scene, of fifth century date. *Ibid.* pp. 208–212 (7 figs.) the same writer records the acquisition of a large terra-cotta plaque decorated with a funeral scene in relief (Fig. 5). The body of a woman is laid upon a bier and mourners stand around it. Traces of color are still numerous. The relief dates from the first part of the sixth century. Other acquisitions were: a brilliantly colored Etruscan frieze of terra-cotta

of third century date, representing a marine scene; a figurine from Tarentum representing a girl holding a bird; and a boy seated on a rock. The colors on the boy are well preserved. The bronzes include a Greek mirror decorated with a bearded satyr playing the double flutes while a young Scythian sits before him, in relief; a Corinthian helmet from Olympia; a bronze handle in the form of a youth; also a colander, a strigil and a pair of cymbals; four gems of Mycenaean date; and a Roman glass mosaic representing flowers and leaves. *Ibid.* pp. 236-237 (3 figs.) the same writer publishes a bronze statuette (15.6 cm. high) of a drunken Heracles recently acquired by the Museum. It is said to have come from Smyrna. It was cast hollow and filled with lead. It follows the usual type of Heracles of the third century B.C.

Gold Pendants.—In *B. Metr. Mus.* X, 1915, pp. 117-120 (4 figs.), Miss C. L. R(ANSOM) reports that in 1914 the Metropolitan Museum acquired three sets of gold pendants from Egypt. One set of seventeen pieces represents rams' heads; the second, of fifteen pieces, flies; the third, of six pieces, heads of the goddess Sekmet. The third necklace is later than the other two, but all probably date between the twentieth and twenty-fifth dynasties.

The Heart Scarab of Queen Amenardis.—In *B. Metr. Mus.* X, 1915, pp. 116-117 (2 figs.), Miss C. L. R(ANSOM) reports that the Metropolitan Museum has recently received a number of scarabs, the most important of which is of green porphyry, 8 cm. long, 5.7 cm. wide, and 1.6 cm. thick. It has been broken into three pieces. The inscription and cartouche prove it to be the heart scarab of Queen Amenardis of the twenty-fifth dynasty. It probably dates from about 660 B.C.



FIGURE 5.—TERRA-COTTA RELIEF IN NEW YORK

A Head from Angkor Wat.—In *B. Metr. Mus.* X, 1915, pp. 219-220 (fig.), D. F(RIEDLY) publishes the head of an image of worship from the temple of Angkor Wat in Cambodia, recently acquired by the Metropolitan Museum of New York. The face shows that the Khmeres, the authors of this sculpture, were a race midway between Hindus and Chinese. The hair shows traces of lacquer. The head probably dates from before the tenth century A.D.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL, AND RENAISSANCE ART

EGYPT

A NEW TYPE OF COPTIC CROSS.—In *Or. Christ.* IV, 1914–15, pp. 306–311 (4 figs.), C. M. KAUFMANN publishes examples of a peculiar kind of Coptic cross, the “tube-cross” of metal.

GREECE

THE PAINTER EMMANUEL.—In *Or. Christ.* IV, 1914–15, pp. 76–84, N. A. BEES throws new light on Emmanuel the painter of *Cod. Barb. Gr.* 527, showing that he lived about 1600 instead of at the time of the fall of Constantinople as supposed by Lambros.

ECCLESIASTICAL GEOGRAPHY.—In *Or. Christ.* IV, 1914–15, pp. 238–278, N. A. BEES publishes material for the mediaeval and modern ecclesiastical geography of Greece.

A GREEK HOSTIA STAMP.—In *Or. Christ.* IV, 1914–15, pp. 85–87 (fig.), C. M. KAUFMANN publishes a Greek Hostia stamp of the beginning of the last century representing Constantine, Helena, and another imperial pair; the interest of the piece lies in the fact that these stamps regularly have only symbolic decoration and this figured one may reflect an ancient form.

ITALY

ACQUISITIONS BY THE MINISTRY OF PUBLIC INSTRUCTION.—The Italian Ministry of Public Instruction has recently purchased two examples of Cagnacci, a Fish-monger for the R. Galleria d'Arte Antica, Rome, and a Cleopatra for the Bologna Pinacoteca. (C. RICCI, *Boll. Arte*, IX, 1915, pp. 281–282; 2 pls.; fig.)

PROPOSED EXHIBITION OF OLD ITALIAN AQUATINTS.—Preliminary to a suggested exhibit of early Italian aquatints, C. VICENZI writes in *Rass. d'Arte*, XV, 1915, pp. 5–18 (19 figs.), a criticism of the works of the etchers, Piranesi, Marieschi, Canaletto, Bellotto, and Tiepolo.

NEW ATTRIBUTIONS TO GIOVANNI FRANCESCO DA RIMINI.—In *Rass. d'Arte*, XV, 1915, p. 74 (2 figs.), F. M. PERKINS adds to the list of the works of Giovanni Francesco da Rimini a tondo of God the Father attended by Angels belonging to L. Rosenberg of Paris, a small St. Anthony of Padua in the collection of Carl Loeser at Florence, a Madonna in the Walters Collection, a Saint in the Palazzo Ducale at Urbino (Sala II, No. 104), and an Adoration in the museum of Le Mans, France.

THE WORKS OF GIOVANNI DI GIAMPIERO.—In *Pagine d'Arte*, III, 1915, pp. 129–130 (2 figs.), A LUPATELLI calls attention to the works, as far as they are now known, of the Venetian sculptor Giovanni di Giampiero: the sarcophagus of B. Bartolini in the Perugia museum (1492), and the portal of S. Maria delle Lacrime, near Trevi (1511). The employment of this sculptor at Spoleto (1490–1492) is attested also by extant documents.

ART ALONG THE AUSTRIAN FRONTIER.—T. SILLANI, who has written a book, *Lembi di Patria*, on the subject, discusses in a number of articles (*Pagine d'Arte*, III, 1915, pp. 73–76 (5 figs.); 89–91 (2 figs.); 113–115 (3 figs.))

the works of art along the Austrian border, in Dalmatia, at Aquileia, Capodistria, and Parenzo.

A VITA OF JACOPO DA EMPOLI.—In *Arte e Storia*, XXXIV, 1915, pp. 207–212 (fig.), G. BATTELLI publishes from a Magliabechiano manuscript a short account of the life and works of Jacopo da Empoli written by his pupil Virgilio Zaballi. A catalogue of Empoli's known works is added.

TWO NEW PICTURES BY PARIS BORDONE.—In *Burl. Mag.* XXVIII, 1915, pp. 93–98 (2 figs.), C. PHILLIPS publishes two new examples of the work of Paris Bordone: a Holy Family with Donor in the possession of Sir George Warrender, London, and a Repose in Egypt belonging to the Berenson Collection, Settignano. The two are closely related and show the earliest stages of the artist.

ASCOLI PICENO.—**The Romanesque Churches.**—In *Rass. Bibl. d'Arte Ital.* XVIII, 1915, pp. 53–63 (fig.), E. CALZINI gives an account of the Romanesque churches of Ascoli Piceno. The stilted arches in two reveals above the doors and many other details of portal decoration reflect South Italian influence; the division of the façade into rectangular compartments is Tuscan; the diamond cornice is ultimately French, but here borrowed from the Abruzzi.

BOLOGNA.—**Two Intarsias Designed by Cossa.**—In the choir of S. Petronio, Bologna, are two saints, St. Petronius and St. Ambrose, done in intarsia by Agostino de' Marchi. The designs were, however, furnished by Francesco del Cossa, as is shown not only by the agreement with his style but also in the case of St. Petronius by a document in the cathedral archives. (*Boll. Arte*, IX, 1915, p. 263; 3 figs.)

The Identity of Jacobino de' Papazzoni.—In *Boll. Arte*, IX, 1915, pp. 179–180, F. FILIPPINI publishes a document of 1365 from the Bologna Archivio di Stato which mentions the painter Jacobino de' Papazzoni, thus vouching for that form of the name. The artist may be identical with Jacobino de' Bavosi and with the "Jacobus" who signed the Mezzaratta frescoes, but nothing prevents the distinctness of all three.

BORDOGNA.—**A Discovery of Early Cinquecento Frescoes.**—In a little chapel of S. Rocco near Bordogna (Bergamo) there has recently been found a series of Bergamesque frescoes painted in the early sixteenth century by various local painters. They are in good preservation because already covered in 1580. (L. ANGELINI, *Pagine d'Arte*, III, 1915, pp. 58–59; fig.)

BRESCIA.—**New Moretto Documents.**—In *Arch. Stor. Lomb.* XLII, 1915, pp. 176–180, G. BONELLI publishes two documents relating to Moretto which are of human biographical interest as showing the prosperous artist's practice of making generous loans of money to his friends.

CERTALDO.—**Early Quattrocento Panels.**—In *Rass. d'Arte*, XV, 1915, pp. 185–186 (4 figs.), M. MANSFIELD publishes a hitherto unnoticed series of small paintings from the altar step of the church of SS. Michele e Jacopo, Certaldo. The subjects are taken from the story of the local Beata Giulia. The paintings show the influence of Lorenzo Monaco and the Siense and are done in a sort of miniature style; they should date at the very beginning of the fifteenth century.

FLORENCE.—**Documents for the Fortezza da Basso.**—In *Arte e Storia*, XXXIV, 1915, pp. 162–166, L. DAMI publishes three new documents concerning the building of the Fortezza da Basso. This was constructed after designs

by Antonio da Sangallo during the years 1533 to 1537 as a castle for Alessandro de' Medici.

MILAN.—A Drawing Attributed to Lionbruno.—In *Rass. d'Arte*, XV, 1915, pp. 189–190 (pl.), G. FRIZZONI attributes to Lorenzo Lionbruno an ink-drawing tinted with aquarelle in the Dubini Collection, Milan. The Death of Eurydice is represented in a form which derives artistically from Mantegna and on the literary side from Poliziano.

A Painting by Giovanni Paolo de Agostini.—G. NICODEMI publishes in *Rass. d'Arte*, XV, 1915, pp. 180–182 (3 figs.), a hitherto ignored work of the obscure Quattrocento Paduan painter Giovanni Paolo de Agostini. The picture, a Pietà in S. Maria alla Porta, Milan, is of interest as an example of the softening of the style of Mantegna through the influence of that of Antonello.

A New Amadeo in the Museo Civico.—The Museo Civico of Milan has recently added to the collection of sculptures by Giovanni Antonio Amadeo a figure of an angel which dates from the time of the sculptor's activity at the Certosa of Pavia, 1475–1482. (C. ELLI, *Pagine d'Arte*, III, 1915, pp. 67–68; fig.)

MOLTEDO.—A Van Dyck Restored.—The General Direction for Fine Arts announces the successful restoration of a neglected Holy Family with St. Anne by Van Dyck in the Parrocchiale of Moltedo. The picture was presumably painted on the artist's second visit to Liguria, 1624–1625. (*Boll. Arte*, IX, 1915, p. 160; fig.)

NAPLES.—New Artistic Documents.—In *Arch. Stor. Prov. Nap.* I, 1915, pp. 352–367, G. D'ADDOSIO continues his publication begun in the preceding number of this periodical of documents on Neapolitan artists of the sixteenth and seventeenth centuries drawn from the records of the banks. This installment brings material concerning Imparato Giov. Thomase, Infante Camillo or Achille, Iodice Francesco, Lamberto de Simone, Landi Angelo, Landini Bernardino, Landano Nardo Angelo, Lazzari Jacopo, Lazzari Dionisio, Lichetti Pietro, Maisini or Maitiniti Raffaele, and Malsoma or Malasoma Andrea.

The Castello di Belvedere.—In *Arch. Stor. Prov. Nap.* I, 1915, pp. 101–179 (6 figs.), is published posthumously with complete documentary evidence an account of the Castello di Belvedere or Monteleone near Naples by G. DE BLASII. This castle was built by Frederick II, 1227–1229, damaged in the disturbances following his death, 1250, and rebuilt on a larger scale by Charles I of Anjou, 1275–1277.

PERUGIA.—New Documents.—Supplementary to the documents collected by Bombe, *Geschichte der Peruginer Malerei*, U. GNOLI in *Boll. Arte*, IX, 1915, pp. 119–128, 305–312, offers his gleanings of unpublished documents from the Perugian archives; he has confined himself to the artists of the fifteenth and early sixteenth centuries.

ROME.—Two Paintings at the British Embassy.—In *Rass. d'Arte*, XV, 1915, pp. 145–146 (pl.; 2 figs.), M. DE BENEDETTI publishes two pictures belonging to Sir Rennel Rodd, British Ambassador at Rome. One is a St. Jerome attributed to Palma Vecchio, the other a Madonna by Giampietrino. G. CAGNOLA publishes a Flemish copy of the latter in the Ehrich Galleries, New York.

The Exile of Domenico Fontana.—In *Boll. Arte*, IX, 1915, pp. 165–168, J. A. F. ORBAAN publishes a number of documents from Roman archives which

concern the departure of Domenico Fontana from Rome and his subsequent mysterious and unwelcome stay in Naples.

Art at Rome in the Seventeenth Century.—In *Arte e Storia*, XXXIV, 1915, pp. 178–181, E. SCATASSA publishes documents of the early seventeenth century relating to artists and collections, which he has extracted from the Archivio Capitolino. *Ibid.* pp. 276–280, are given more documents from the same source which indicate the loss of art works in Rome during the early eighteenth century.

SOCIANA.—**Discovery of Important Renaissance Sculptures.**—In *Boll. Arte*, IX, 1915, pp. 149–154 (2 pls.; 4 figs.), O. H. GIGLIOLI brings out three finds of prime importance: two angels in high relief kneeling with candelabra, which rank among the latest and ripest works of Mino da Fiesole, and a Madonna relief by Antonio Rossellino, dating from the very beginning of the artist's career, and perhaps his earliest work. All three have escaped notice though in the heart of Tuscany in the church of S. Clemente at Sociana. The ultimate provenance and the history of the works is a blank before their addition to the 1818 inventory of the church in 1822.

URBINO.—**Attribution of Two Pictures.**—In *Rass. d'Arte*, XV, 1915, pp. 59–62 (4 figs.), G. BERNARDINI attributes a Madonna in the cathedral sacristy to the Fratelli Salimbene da Sanseverino and a standing figure of S. Jacopo della Marca in the Urbino Pinacoteca, generally assigned to Crivelli, to his pupil Stefano Folchetti. G. CAGNOLA would reverse the latter attribution.

VENICE.—**The Damage to S. Maria degli Scalzi.**—The injury incurred by the church of S. Maria degli Scalzi from a bomb dropped on an Austrian air raid, and the great fresco of Tiepolo lost by that event are treated in *Burl. Mag.* XXVIII, 1915, pp. 121–122 (fig.), by B. NICHOLS; and again in *Pagine d'Arte*, III, 1915, pp. 137–138 (fig.).

VICENZA.—**The Removal of the Studio of Valerio Belli.**—In *L'Arte*, XVIII, 1915, pp. 253–257, G. ZORZI publishes the documents concerning the sale of the studio of Valerio Belli for 500 scudi and the consequent removal of this veritable museum from Vicenza to Trent and its loss to Italy.

FRANCE

LYONS.—**The Missal of Sainte-Chapelle of Paris.**—In *Rev. Arch.*, fifth series, II, 1915, pp. 37–65 (25 figs.), J. BIROT and J.-B. MARTIN publish an account of the Manuscript and the miniatures of the Missal of Sainte-Chapelle, Paris, now preserved in the treasury of the Primacy of St. John at Lyons. The work is Parisian of the early fourteenth century.

ROUVROY.—**A Merovingian Tomb.**—In *R. Arch.*, fifth series, II, 1915, pp. 242–244 (3 figs.), is a letter from Captain Dumouthay containing a description, with drawings, of the contents of a Merovingian tomb uncovered by French troops in digging a trench near Rouvroy (Somme). The description and drawings are by Sergeant Mazet. The tomb contained some pottery, a sword, a knife, and a buckle.

HOLLAND

AMSTERDAM.—**An Acquisition of the Rijksmuseum.**—In *Burl. Mag.* XXVII, 1915, pp. 248–251, L. CUST publishes an extract from the catalogue by Van der Doort showing that there were two still lifes in the collection of

King Charles I by Johannes Torrentius. These have disappeared, but a third, not catalogued by Van der Doort but bearing on the back the mark of this collection and mentioned in a contemporary letter as brought by the artist to England, has recently come to light and has been acquired for the Rijksmuseum, Amsterdam. The writer appends a note incorporating the researches of D. W. van Dam which show that the Rembrandt portrait hitherto called Johan van Echten is actually a portrait of a brother, Evert van Echten.

THE HAGUE.—The New "Huis Nieuwburg" of the Gemeentemuseum.—In *Mh. f. Kunstw.* VIII, 1915, pp. 251–253, R. BANGEL cites documents to show that Maria van der Laeck is not the sister of Reinier van der Laeck but his daughter, born 1638. Therefore the landscape of 1644 representing "Huis Nieuwburg" at Rijswijk, which has recently been acquired by the Gemeentemuseum at The Hague, cannot be attributed to her, only to her father.

GERMANY

BERLIN.—Giotto's Death of the Virgin.—In *Rass. d'Arte*, XV, 1915, pp. 187–188 (fig.), F. G. DI GIUSEPPE questions the identification of the Death of the Virgin lately acquired by the Berlin museum with the picture mentioned by Ghiberti, Vasari, etc. He publishes a letter of 1832 in which another Death of the Virgin, then in Pisa, is described as that from Ognisanti and maintains that the drawing and dimensions of this picture which accompany the letter better accord with the descriptions of Giotto's work than does the Berlin example.

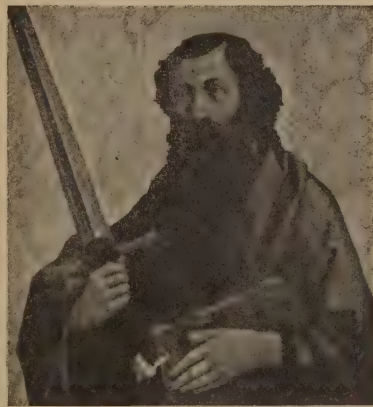
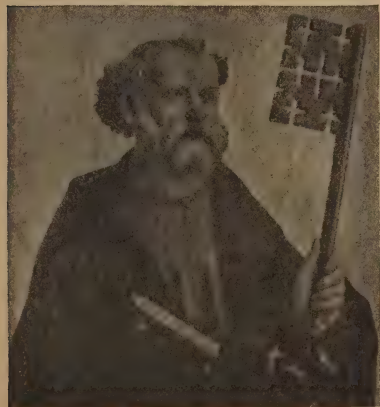
SCHLEDEHAUSEN.—An Attribution to Meister Francke.—In *Z. Bild. K.* XXVI, 1915, pp. 231–234 (fig.), V. C. HABICHT agrees with Goldschmidt that the painter Meister Francke of Hamburg was also active as a sculptor and attributes to him the altar of the church at Schleddehausen, dating it 1425–1430.

WOLFENBÜTTEL.—A Drawing by Jan van Eyck.—In *Jb. Preuss. Kunsts.* LXIII, 1915, pp. 215–222 (pl.; 5 figs.) H. ZIMMERMANN publishes as a drawing by Jan van Eyck a silver-point Annunciation in the library at Wolfenbüttel and dates the attribution shortly after 1426. The Annunciation takes place in a Gothic church of typical Van Eyck style, yet does not so closely resemble any picture as to be an imitation. This drawing has the distinction of once having belonged to the famous and historically important amateur, Phillip Hainhofer of Augsburg.

AUSTRIA-HUNGARY

TYROLESE PICTURES.—In *Jb. Kunsth. Samm.* XXXII, 1915, pp. 254–278 (pl.; 10 figs.), H. KENCZLER publishes six panels of the Life of Mary which have lately been presented to the Rákóczi Museum at Kaschau, Hungary, and identifies as belonging to the series the puzzling panel, No. 1395, of the Vienna Hofmuseum. The six Kaschau panels were originally three in number and painted on both sides as is the Vienna panel. Kenczler calls the whole set a product of Bohemian art belonging to the altarpiece probably of the church of St. Elizabeth, Kaschau, from which church those panels still in Kaschau are said to have come, and dates them in the second quarter of the fifteenth century; but H. BRAUNE (*Mh. f. Kunstw.* VIII, 1915, pp. 249–250; 6 figs.) points out that Hans Semper had long since determined the origin of the

Vienna panel, hence that of the others in Kaschau, as at Brixen in Tyrol from the School of Jacob Sunter. Braune also calls attention to eight panels in the museum of Moulins which are the product not of the fictitious Netherland Master Awrechts to whom they have been assigned but of Michael Pacher's studio about 1460 or 1470. Four represent the story of St. Stephen, the other four the Passion. Of Michael Pacher himself there are here published



FIGURES 6-9.—ST. CATHARINE, ST. BARBARA, ST. PETER, AND ST. PAUL;
BY MICHAEL PACHER

four half figures of saints at Wilten, near Innsbruck (Figs. 6-9). The two pictures, Nos. 54 and 55 of the Nationalmuseum at Munich are also attributed to the Tyrol rather than to the Munich school as catalogued. Finally four panels by Simon von Taister representing St. Elizabeth's legend and two saints are noted; they are in the possession of Frau von Miller in the chapel of the castle at Meeresburg.

GREAT BRITAIN

LONDON.—An Imitation of Mantegna by Cranach.—In *Rass. d'Arte*, XV, 1915, p. 73 (pl.; fig.), B. BERENSON publishes a Madonna in the collection of Murray Marks, London, as a translation of an unknown original by Mantegna into German by the artist Lucas Cranach. To sustain the attribution to Cranach G. CAGNOLA offers for comparison a fragment, the lower part of a picture which was once a typical Venus and Cupid, but which now shows only the lower half of the Venus and the playing Cupid. This picture, in a private collection at Milan, bears Cranach's name.

Leonardo's Madonna of the Rocks.—In *Rass. d'Arte*, XV, 1915, pp. 97-101 (pl.), L. BELTRAMI gives a résumé of new Leonardo documents which show that the Madonna of the Rocks was only paid for in full by the Confraternity of the Conception on Oct. 23, 1508. From this evidence their version of the picture was not given up and carried off to France by Louis XII, as heretofore alleged, but is the same as that which passed from the Cappella della Concezione to the National Gallery. Whatever the Louvre painting may be, the London example is thus the actual work of Leonardo. In *Arte e Storia*, XXXIV, 1915, pp. 231-233, D. SANT' AMBROGIO expresses the belief that the true original is the smaller treatment of the subject at Affori, for this would allow for the saints at the sides mentioned in the contract, and that the London picture was a studio product for which Leonardo would have had little time after withdrawing his own picture, 1498-1499, but which would be, as the documents imply, turned over to De Predis.

Two Drawings by Bramantino in the British Museum.—In *Boll. Arte*, IX, 1915, pp. 13-19 (5 figs.), G. BERNARDINI attributes two aquarelle drawings in the British Museum (1895, 9, 15, 760—S. C. R., 313 and 1895, 9, 15, 761—S. C. R., 314) to Bramantino; the subjects are Christ shown to the Populace and St. Mark Enthroned.

An Attribution to Cosimo Tura.—In *Burl. Mag.* XXVII, 1915, pp. 202-205 (pl.), T. BORENIUS publishes a panel of the Crucifixion acquired by Herbert Cook from the sale of the F. Tessier Collection and attributes it to Cosimo Tura. In a subjoined note the same writer identifies the well-known Bellini Christ in the Louvre as a certain Salvatore by Giovanni Bellini mentioned by Ridolfi as a gift of the artist to the Padri di Santo Stefano.

UNITED STATES

MISCELLANY.—In *Rass. d'Arte*, XV, 1915, pp. 121-125 (pl.; 8 figs.), F. M. PERKINS reproduces the Prelate by Sebastiano del Piombo of the Angus Collection, Montreal, dating the picture 1510-1515. Another Sebastiano, a Judith in a Berlin private collection, is also published and dated shortly after 1519. Of Andrea del Sarto a portrait in the Wildenstein Collection in New York is published; of Jacopo Bassano The Rich Gormand in the Platt Collection at Englewood; of Palma Vecchio a female portrait in the Murray Collection at London; of Bonifazio Veronese another female figure from a private collection in Florence; of Moretto a Magdalene formerly in the Blakeslee Collection and now privately owned in New York; and finally of Dosso Dossi a Landscape with Figures and a Bust of a Warrior in the Ehrich Galleries at New York.

BOSTON.—Acquisitions of the Museum of Fine Arts.—The Brayton Ives sale made the year 1915 one of great growth in the print department of the Boston museum. Two additions of first importance were the complete series of Schongauer's Passion and a full set of the fifty so-called "Tarocchi" prints. Other acquisitions were two Planets from the rare Florentine series of the Finiguerra school, four examples of Giulio Campagnola, two Mantegnesque engravings, a Pietà by the North Italian "PP," Leda and Her Children by the Bolognese "IB" with the bird, Dante in Fear by an anonymous late Quattrocento Dante illustrator, Apollo and Diana by Jacopo de Barbari, The Entry into Jerusalem by the German "Lcz," The Travellers of Jacob Ruysdael, a Saffteven landscape, a Goatherd by Cornelis Mattue, various Van Dyck portraits, St. Michael and the Dragon from the Apocalypse series of Jean Duvet, a Flagellation by Jean Gourmont, two of the famous Parisian views by Jacques Callot, some portraits by Thomas de Leu and examples of more modern French and English artists. (*B. Mus. F. A. XIII*, 1915, pp. 63-70; 11 figs.) Mrs. W. Scott Fitz has presented three Italian primitives to the museum, a Madonna by Barnaba da Modena, a head of the Magdalene by Segna di Bonaventura, and a Saint of the School of Simone Martini. (*B. Mus. F. A. XIII*, 1915, p. 83; fig.) A Battle Scene by Paolo Uccello is a cassone panel formerly in the Butler Collection, London, acquired by the museum. (*B. Mus. F. A. XIII*, 1915, p. 62; fig.) To the collection of western sculptures has been added a French Gothic niche of the early fifteenth century. (*B. Mus. F. A. XIII*, p. 70; fig.)

CAMBRIDGE.—An Annunciation by Andrea Vanni in the Fogg Museum.—In *Art in America*, III, 1915, pp. 226-231 (3 figs.), G. H. EDGELL publishes an Annunciation in two panels by Andrea Vanni formerly in the Saracini palace at Siena and now in the Fogg Museum. The painting has suffered from time, but not from restoration and is of interest as showing the preponderant influence of Simone Martini.

CHICAGO.—Manuscript Accessions of the Art Institute.—The *Bulletin of the Art Institute of Chicago* (IX, 1915, pp. 97-100; 5 figs.) discusses some of the manuscript accessions from the Voynich Collection: an unpublished and anonymous *Description of the World* written and illuminated in Paris, a North Italian Book of Hours, and a Florentine manuscript of Horace's *Art of Poetry*—all three of the fourteenth century, and a copy of the Vulgate illuminated in the Canterbury style of the early thirteenth century.

MINNEAPOLIS.—The Acquisitions of the New Museum.—The *Bulletin of the Minneapolis Institute of Arts* publishes the following accessions: a miniature by Jean Bourdichon (IV, 1915, pp. 26-28; fig.), a fifteenth century Venetian well-head (*ibid.* pp. 74-75; fig.), The Concert by Van Musscher from the Blakeslee Collection (*ibid.* pp. 78-79; fig.), and a Pomona by Giovanni della Robbia (*ibid.* pp. 110-112; fig.).

NEW YORK.—Acquisitions of the Metropolitan Museum.—Important new additions to the Metropolitan Museum are a panel by Butinone, four panels by Gozzoli, and a number of tapestries. The picture by Butinone, correctly Bernardino Jacopi of Treviglio, is apparently the right-hand shutter of a dismembered triptych; it represents St. John and St. Lawrence and is a good example of Lombard art before the Leonardesque period. (*B. Metr. Mus.* X, 1915, pp. 152-154; fig.) The four panels by Benozzo Gozzoli repre-

sent the stories of St. Peter and Simon Magus, the Conversion of St. Paul, St. Zenobius and the Widow's Child, Totila before St. Benedict. They were painted about 1461 for the chapel of the Alessandri in S. Pier Maggiore, Florence. (*B. Metr. Mus.* X, 1915, pp. 224-228; 4 figs.) The first tapestry to be mentioned is a large Gothic hunting tapestry which would seem to be French or Franco-Flemish of about 1500 and it suggests the somewhat earlier Hardwicke Hall examples. (*B. Metr. Mus.* X, 1915, p. 214; fig.) More important is the Gillespie bequest of eight tapestries: one German representing the Epiphany and dating about 1500, two Brussels tapestries from about 1510 representing "Courts of Love," a pair of Renaissance hangings of the second half of the century and showing St. Paul before Agrippa and St. Paul Preaching at the River and bearing the device of the unknown Brussels weaver who did the set of the History of Jacob at Vienna, a decorative piece of Flemish work of approximately the same date and of considerable interest because made for the side or back of one of the upholstered benches popular at the time, a large Flemish tapestry of the early seventeenth century representing the month June as a fishing scene and in the clouds above Diana with the wet and the dry moon and the crab on her chariot wheel, and finally a Brussels tapestry of the late seventeenth century representing Pomona. This last is attributed to the loom of Pierre van den Hecke and the cartoon is in the style of the painter Van Schnoor. (*B. Metr. Mus.* X, 1915, pp. 247-252; 5 figs.)

PHILADELPHIA.—An Attribution to Jan Lys.—In *Art in America*, IV, 1915, pp. 53-58 (2 figs.), R. OLDENBOURG attributes the picture, formerly called a Velasquez, now a Strozzi, of the Satyr and the Peasant in the Widener Collection, to Jan Lys and to his earlier period.

WORCESTER.—Acquisitions of the Museum.—New additions to the Worcester museum are two fifteenth century Italian columns and a small triptych in alabaster representing the Madonna between Saints. The figures are distinctive enough to allow an attribution to the school of the Gaggini, South Italy, fifteenth century. (*Bulletin of the Worcester Art Museum*, VI, 1915, pp. 8-12; 3 figs.)

The Ghirlandaio Portrait in the Worcester Museum.—In *Rass. d'Arte*, XV, 1915, p. 19 (fig.), F. M. PERKINS corroborates the attribution to Ghirlandaio of the portrait recently acquired as a Ghirlandaio by the Worcester museum.

ABBREVIATIONS

Abh.: Abhandlungen. *Allg. Ztg.*: Münchener Allgemeine Zeitung. *Alt. Or.*: Der alte Orient. *Am. Anthr.*: American Anthropologist. *Am. Archit.*: American Architect. *A.J.A.*: American Journal of Archaeology. *A.J.Num.*: American Journal of Numismatics. *A. J. Sem. Lang.*: American Journal of Semitic Languages and Literature. *Amid. Mon.*: Ami des Monuments. *Ant. Denk.*: Antike Denkmäler. *Ann. Arch. Anth.*: Annals of Archaeology and Anthropology. *Ann. Scuol. It. Ath.*: Annuario della r. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente. *Arch. Ael.*: Archaeologia Aeliana. *Arch. Anz.*: Archäologischer Anzeiger. *Arch. Rec.*: Architectural Record. *Arch. Rel.*: Archiv für Religionswissenschaft. *Arch. Miss.*: Archives de Missions Scientifiques et Littéraires. *Arch. Stor. Art.*: Archivio Storico dell' Arte. *Athen.*: Athenaeum (of London). *Ath. Mitt.*: Mitteilungen d. k. d. Archaeol. Instituts, Athen. Abt.

Beitr. Assy.: Beiträge zur Assyriologie. *Ber. Kunsts.*: Amtliche Berichte aus den Königlichen Kunstsammlungen. *Berl. Akad.*: Preussische Akademie der Wissenschaften zu Berlin. *Berl. Phil. W.*: Berliner Philologische Wochenschrift. *Bibl. Stud.*: Biblische Studien. *Bibl. World*: The Biblical World. *B. Ac. Hist.*: Boletín de la real Academia de la Historia. *Boll. Arte.*: Bollettino d' Arte. *Boll. Num.*: Bollettino Italiano di Numismatica. *Bonn. Jb.*: Bonner Jahrbücher: Jahrbücher des Vereins von Altertumsfreunden im Rheinlande. *B.S.A.*: Annual of the British School at Athens. *B.S.R.*: Papers of the British School at Rome. *B. Arch. M.*: Bulletin Archéol. du Ministère. *B. Arch. C. T.*: Bulletin Archéologique du Comité des Travaux hist. et scient. *B.C.H.*: Bulletin de Correspondance Hellénique. *B. Inst. Ég.*: Bulletin de l'Institut Égyptien (Cairo). *B. Metr. Mus.*: Bulletin of the Metropolitan Museum of Art, New York. *B. Mus. Brux.*: Bulletin des Musées Royaux des arts décoratifs et industriels à Bruxelles. *B. Mus. F. A.*: Museum of Fine Arts Bulletin, Boston. *B. Num.*: Bulletin de Numismatique. *B. Soc. Ant. Fr.*: Bulletin de la Société des Antiquaires de France. *B. Soc. Anth.*: Bulletin de la Société d'Anthropologie de Paris. *B. Mon.*: Bulletin Monumental. *B. Com. Rom.*: Bullettino d. Commissione Archeologica Comunale di Roma. *B. Arch. Crist.*: Bullettino di Archeologia Cristiana. *B. Pal. It.*: Bullettino di Paleologia Italiana. *Burl. Gaz.*: Burlington Gazette. *Burl. Mag.*: Burlington Magazine. *Byz. Z.*: Byzantinische Zeitschrift.

Chron. Arts: Chronique des Arts. *Cl. Phil.*: Classical Philology. *Cl. R.*: Classical Review. *C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres. *C.I.A.*: Corpus Inscriptionum Atticarum. *C.I.G.*: Corpus Inscriptionum Graecarum. *C.I.L.*: Corpus Inscriptionum Latinarum. *C.I.S.*: Corpus Inscriptionum Semiticarum.

Ἀρχ. Ἐφ.: Ἀρχαιολογικὴ Ἐφημερίς. *Eph. Ep.*: Ephemeris Epigraphica. *Eph. Sem. Ep.*: Ephemeris für Semitische Epigraphik. *Exp. Times*: The Expository Times.

Fornvännen: Fornvännen: meddelanden från K. Vitterhets Historie och Antikvitets Akademien.

Gaz. B.-A.: Gazette des Beaux-Arts. *G.D.I.*: Sammlung der griechischen Dialekt-Inschriften.

I.G.: Inscriptiones Graecae (for contents and numbering of volumes, cf. *A.J.A.* IX, 1905, pp. 96-97). *I.G.A.*: Inscriptiones Graecae Antiquissimae, ed. Roehl. *I. G. Arg.*: Inscriptiones Graecae Argolidis. *I. G. Ins.*: Inscriptiones Graecarum Insularum. *I. G. Sept.*: Inscriptiones Graecae Septentrionalis. *I. G. Sic. It.*: Inscriptiones Graecae Siciliae et Italiae.

Jb. Arch. I.: Jahrbuch d. k. d. Archäol. Instituts. *Jb. Kl. Alt.*: Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Litteratur und für Pädagogik. *Jb. Kunsth. Samm.*: Jahrbuch der Kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses. *Jb. Phil. Päd.*: Neue Jahrbücher für Philologie und Pädagogik (Fleckeisen's Jahrbücher). *Jb. Preuss. Kunsts.*: Jahrbuch d. k. Preuss. Kunstsammlungen. *Jh. Oest. Arch. I.*: Jahreshefte des oesterreichischen Archäologischen Instituts. *J. Asiat.*: Journal Asiatique. *J.A.O.S.*: Journal of American Oriental Society. *J. B. Archaeol.*: Journal of the British Archaeological Association. *J. B. Archit.*: Journal of the Royal Institute of British Architects. *J. Bibl. Lit.*: Journal of Biblical Literature. *J.H.S.*: Journal of Hellenic Studies. *J. Int. Arch. Num.*:

Διέθνῃς Ἐφημερίς τῆς νομισματικῆς ἀρχαιολογίας, Journal international d'archéologie numismatique (Athens).

Kb. Gesamtver.: Korrespondenzblatt des Gesamtvereins der deutschen Geschichts- und Altertumsvereine. *Klio*: Klio: Beiträge zur alten Geschichte. *Kunstchr.*: Kunstchronik.

Mb. Num. Ges. Wien: Monatsblatt der Numismatischen Gesellschaft in Wien. *Mh. f. Kunstw.*: Monatshefte für Kunstwissenschaft. *Mél. Arch. Hist.*: Mélanges d'Archéologie et d'Histoire (of French School in Rome). *Mél. Fac. Or.*: Mélanges de la Faculté Orientale, Beirut. *M. Acc. Modena*: Memorie della Regia Accademia di scienze, lettere ed arti in Modena. *M. Inst. Gen.*: Mémoires de l'Institut Genevois. *M. Soc. Ant. Fr.*: Mémoires de la Société des Antiquaires de France. *Mitt. Anth. Ges.*: Mitteilungen der anthropologischen Gesellschaft in Wien. *Mitt. C.-Comm.*: Mitteilungen der königlich-kaiserlichen Central-Commission für Erforschung und Erhaltung der Kunst- und historischen Denkmale. *Mitt. Or. Ges.*: Mitteilungen der deutschen Orient-Gesellschaft. *Mitt. Pal. V.*: Mitteilungen und Nachrichten des deutschen Palästina Vereins. *Mitt. Nassau*: Mitteilungen des Vereins für nassauische Altertumskunde und Geschichtsforschung. *Mitt. Vorderas. Ges.*: Mitteilungen der vorderasiatischen Gesellschaft. *Mon. Ant.*: Monumenti Antichi (of Accad. d. Lincei). *Mon. Piot*: Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc. (Fondation Piot). *Mün. Akad.*: Königlich Bayerische Akademie der Wissenschaften, München. *Mün. Jb. Bild. K.*: Münchner Jahrbuch der bildenden Kunst.

N. D. Alt.: Nachrichten über deutsche Altertumskunde. *Nomisma*: Nomisma: Untersuchungen auf dem Gebiete der antiken Münzkunde. *Not. Scav.*: Notizie degli Scavi di Antichità. *Num. Chron.*: Numismatic Chronicle. *Num. Z.*: Numismatische Zeitschrift. *N. Arch. Ven.*: Nuovo Archivio Veneto. *N. Bull. Arch. Crist.*: Nuovo Bullettino di Archeologia cristiana.

Or. Lit.: Orientalistische Literaturzeitung. *Or. Lux*: Ex Oriente Lux.

Pal. Ex. Fund.: Quarterly Statement of the Palestine Exploration Fund. *Πρακτικά*: Πρακτικά τῆς ἐν Ἀθῆναις ἀρχαιολογικῆς ἐταιρείας. *Proc. Soc. Ant.*: Proceedings of the Society of the Antiquaries.

Rass. d' Arte: Rassegna d' Arte. *Rec. Past*: Records of the Past. *R. Tr. Ég. Assy.*: Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes. *Reliq.*: Reliquary and Illustrated Archaeologist. *Rend. Acc. Lincei*: Rendiconti d. r. Accademia dei Lincei. *Rep. f. K.*: Repertorium für Kunstwissenschaft. *R. Assoc. Barc.*: Revista de la Asociacion artistico-arqueologica Barcelonesa. *R. Arch. Bibl. Mus.*: Revista di Archivos Bibliotecas, y Museos. *R. Arch.*: Revue Archéologique. *R. Art Anc. Mod.*: Revue de l'Art ancien et moderne. *R. Art Chrét.*: Revue de l'Art Chrétien. *R. Belge Num.*: Revue Belge de Numismatique. *R. Bibl.*: Revue Biblique Internationale. *R. Ep.*: Revue Épigraphique. *R. Ét Anc.*: Revue des Études Anciennes. *R. Ét. Gr.*: Revue des Études Grecques. *R. Ét. J.*: Revue des Études Juives. *R. Hist. Rel.*: Revue de l'Histoire des Religions. *R. Num.*: Revue Numismatique. *R. Or. Lat.*: Revue de l'Orient Latin. *R. Sém.*: Revue Sémitique. *R. Suisse Num.*: Revue Suisse de Numismatique. *Rh. Mus.*: Rheinisches Museum für Philologie, Neue Folge. *R. Abruzz.*: Rivista Abruzzese di Scienze, Lettere ed Arte. *R. Ital. Num.*: Rivista Italiana Numismatica. *R. Stor. Ant.*: Rivista di Storia Antica. *R. Stor. Calabr.*: Rivista Storica Calabrese. *R. Stor. Ital.*: Rivista Storica Italiana. *Röm.-Germ. Forsch.*: Bericht über die Fortschritte der Römisch-Germanischen Forschung. *Röm.-Germ. Kb.*: Römisch-Germanisches Korrespondenzblatt. *Röm. Mitt.*: Mitteilungen d. k. d. Archäol. Instituts, Röm. Abt. *Röm. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.

Sächs. Ges.: Sächsische Gesellschaft (Leipsic). *Sitzb.*: Sitzungsberichte. *S. Bibl. Arch.*: Society of Biblical Archaeology, Proceedings.

Voss. Ztg.: Vossische Zeitung.

W. kl. Phil.: Wochenschrift für klassische Philologie.

Z. D. Pal. V.: Zeitschrift des Deutschen Palästina Vereins. *Z. Aeg. Sp. Alt.*: Zeitschrift für Aegyptische Sprache und Altertumskunde. *Z. Alttest. Wiss.*: Zeitschrift für alttestamentliche Wissenschaft. *Z. Assy.*: Zeitschrift für Assyriologie. *Z. Bild. K.*: Zeitschrift für Bildende Kunst. *Z. Ethn.*: Zeitschrift für Ethnologie. *Z. Morgenl.*: Wiener Zeitschrift für die Kunde des Morgenlands. *Z. Morgenl. Ges.*: Zeitschrift der deutschen Morgenländischen Gesellschaft. *Z. Mün. Alt.*: Zeitschrift des Münchener Alterthumsvereins. *Z. Num.*: Zeitschrift für Numismatik.



CYLIX IN THE METROPOLITAN MUSEUM; INTERIOR



CYLIX IN THE METROPOLITAN MUSEUM; EXTERIOR, SIDE A
This "photoplane" was made by Mr. D'Hervilly of the Metropolitan Museum staff



CYLIX IN THE METROPOLITAN MUSEUM; EXTERIOR, SIDE A
This drawing was made by Mr. L. F. Hall of the Metropolitan Museum staff



CYLIX IN THE METROPOLITAN MUSEUM; EXTERIOR, SIDE B
This "photoplane" was made by Mr. D'Hervilly of the Metropolitan Museum staff



CYLIX IN THE METROPOLITAN MUSEUM; EXTERIOR, SIDE B
This drawing was made by Mr. L. F. Hall of the Metropolitan Museum staff

A NEW EUPHRONIOS CYLIX IN THE METROPOLITAN
MUSEUM OF ART

[PLATES II-VI]

VASES bearing the name of Euphronios can be divided into two distinct classes, according as they are signed Εὐφρόνιος ἔγραψεν or Εὐφρόνιος ἐποίησεν. The former are admittedly the work of Εὐφρόνιος as painter, and form a well-defined, homogeneous group; the latter, later in date, attest him the owner of the factory; but they have no painter's name, except in one case where the name is fragmentary.¹ On stylistic grounds these vases can be assigned to several artists,² but the majority were clearly painted by one man. They used to be assigned to Euphronios and classified as examples of his later, more developed style.³ But Furtwängler has rightly pointed out that there is here not a question of advance and development, but of a totally different personality,⁴ and that, for instance, the Geryon vase and the Eurystheus cylix could never have been painted by one and the same person. For want of a better name the painter of the majority of the Εὐφρόνιος ἐποίησεν vases is now commonly referred to as the "Panaitios master," since he occasionally used Panaitios as a καλός name.

A beautiful example of the work of this gifted painter has recently come into the possession of the Metropolitan Museum of Art. It is a cylix decorated both inside and outside with scenes from the life of Heracles.⁵ The inscription ΕΥΦΡΟΝΙΟΣ ΕΓΟΙ... is painted in the interior picture. Unfortunately the cylix is

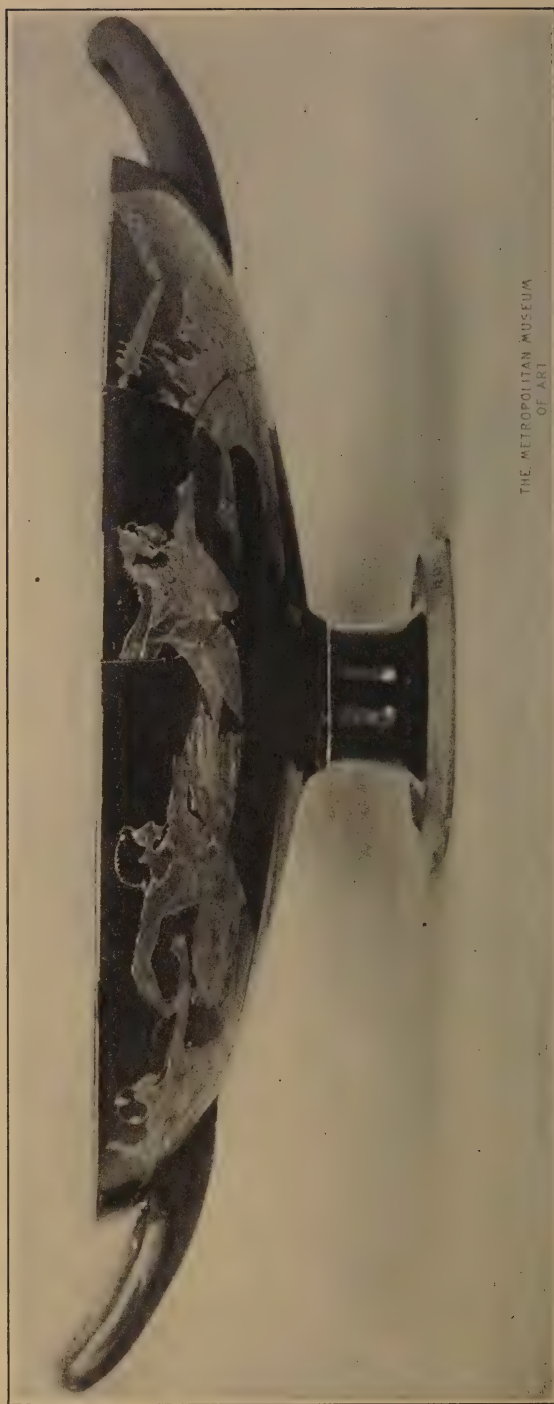
¹ Hartwig, *Die griechischen Meisterschalen*, pl. 53.

² E. Radford, *J.H.S.* XXXV, 1915, p. 139.

³ E.g. Hartwig, *Die griechischen Meisterschalen*, pp. 444 ff.

⁴ Furtwängler und Reichhold, *Griechische Vasenmalerei*, I, pp. 104, 110.

⁵ (Accession No. 12.231.2.) Height $4\frac{1}{8}$ inches (10.5 cm.); diameter $12\frac{7}{8}$ inches (32.7 cm.). A short description of it, with a view of the interior scene, was given in the *Museum Bulletin*, July, 1913, p. 153 f; cf. also E. Radford, *J.H.S.* 1915, p. 123. Its provenance is not known.



THE METROPOLITAN MUSEUM
OF ART

FIGURE 1.—CYLIX SIGNED BY EUPHRONIOS, METROPOLITAN MUSEUM, NEW YORK.

not in good condition. Considerable pieces are missing¹; and the paint used for the detail lines, especially in the figures of both exterior pictures, has largely disappeared. These lines are nevertheless still mostly visible and have been carefully indicated in the drawings.

The scene in the interior represents Heracles (inscribed **HERAKLES**) walking leisurely, with a young companion by his side (Plate II). Heracles wears a short chiton with overfold. He has pulled the chiton up in front through the girdle to form a *kolpos*. The lion's skin serves him as a mantle, covering his head and back. In one hand he holds the club, in the other a bow and arrow. On his back is a quiver fastened by a cord around his neck. Of the little companion not much is preserved; only enough to show that he wore a traveller's hat with wide brim (*petasos*) and sandals with high lacings; and that he is carrying a stick over his shoulder, from which a wine-skin² is apparently suspended. It is difficult to identify him with any particular person. Iolaus, the great friend and faithful helper of Heracles, is always represented on the vases as a full-grown man. He was in reality Heracles' nephew, being the son of Heracles' brother Iphicles, so that it is not impossible that the boy of the picture is meant for Iolaus. But inasmuch as he is elsewhere invariably represented as a man and not a boy, we cannot identify him here with any degree of probability. Several other possibilities suggest themselves. The boy may be merely a little slave, accompanying his master and carrying some of his possessions. Or he may be one of Heracles' sons, preferably Hyllus, who afterwards became the husband of Iole, concerning whom arose the contest between Heracles and the sons of Eurytus figured on one of the exterior sides of this cylix; the presence of Hyllus here would be appropriate as foreshadowing the future outcome of that event. Or, again, the boy may represent Hylas, the favorite of Heracles,³ though this would then be, I believe, the earliest representation of him in Greek art,

¹ These, including one handle, have been restored in plaster and painted black.

² The little protuberance on the side suggests the wine-skin; it is different from the tassels on the three-cornered bundles. For other instances where the leg of the animal is indicated merely by such a protuberance cf. *e.g.* Gerhard, *Auserlesene Vasenbilder*, pl. CCLXXII, 3, and Perrot et Chipiez, *Histoire de l'Art*, X, p. 190, fig. 121.

³ This suggestion I owe to Professor Fairclough of Stanford University.

since all those known are of a much later period.¹ As we have so little evidence, it is difficult to come to a definite conclusion.

The picture is beautifully painted with a great wealth of detail. Diluted glaze is used for the markings of the muscles, for the wavy folds of the *kolpos* and for the shaded lines on the bow, while a brown wash is added to the lion's skin. The cord of the hat, the lacings, and the inscriptions are painted in purple. This variety of coloring gives a decidedly picturesque effect to the whole. Both the pose and the expression of Heracles are very lifelike and alert. The face with the strongly marked lips and the upward tilt to the nose is strongly individual. Noteworthy is the rendering of the eyelashes, which is unusual until a later period.²

The composition of the scene is unusual for the interior of cylices. It can be paralleled by that on a cylix in Boston, published by Hartwig, *Die griechischen Meisterschalen*, pl. XXVI.³

Below the two figures is an exergue with egg-pattern. Encircling the whole scene is a double intersecting maeander interspersed with rosette patterns.⁴

The better preserved scene on the outside of the cylix represents the contest of Heracles and the sons of Eurytus (Plates III-IV). The fight is evidently conceived as taking place at a banquet, as is indicated by the two couches, on which the sons of Eurytus were probably reclining when Heracles began his attack. Heracles is in the centre of the picture. He is about to give young Clytius (inscribed Κλ . . .) a crushing blow with his right fist. One of Clytius's brothers is coming to his rescue from behind, swinging a club and holding out a panther's skin for a shield. On the other side of Heracles, Iphitus (inscribed ΙΦΙΤ. .) is seen striding forward, his bow in his right hand,

¹ Hylas as a legendary figure appears to have been known as early as the fifth century B.C.; but he evidently did not become popular before the Hellenistic period. The story that he accompanied Heracles on the expedition of the Argonauts and was kidnapped by the water nymphs in Mysia is of Alexandrian origin. Cf. Seeliger in Roscher's *Lexikon*, s.v. Hylas, p. 2793.

² For other instances during the severe red-figured period cf. Walters, *History of Ancient Pottery*, I, p. 408; and Furtwängler und Reichhold, *Griechische Vasenmalerei*, I, pl. 32, II, pl. 92.

³ This reference I owe to Mr. J. D. Beazley.

⁴ This complicated maeander pattern occurs on no other known vases of the Panaitios master. It is used occasionally on cylices by Duris, and also occurs on larger vases (cf. Hartwig, *Die griechischen Meisterschalen*, p. 220, note 2, and Walters, *History of Ancient Pottery*, II, p. 213).

his left extended towards Heracles. Behind him a fourth brother is advancing rapidly to join the conflict. In the field are two swords, suspended from the wall in their sheaths.

Heracles is represented nude, except for the lion's skin which covers his head and hangs down his back. He has no weapons. Perhaps the club of the man with the panther's skin belongs to Heracles. Of the four sons of Eurytus the one furthest to the right with the panther's skin wears a short chiton with *kolpos* and overfold, similar to that of Heracles in the interior picture. Clytius has a himation round his waist. The other two are nude, having dropped their himatia for greater freedom of movement; one is left on the couch, the other is lying on the ground. All the figures are bearded except Clytius who has only whiskers. The whole scene is full of impetuous movement. Each figure is studied in reference to its relation to the whole scene, and the result is a successful dramatic whole. The faces are again strongly individualized and have the full lips and big noses which we noticed in the interior picture. Diluted glaze is used for the muscles, the hair on the chests of the two brothers on the left and of Heracles, the whiskers of Clytius, and the lines of the *kolpos* of the brother on the right; it also seems to have been used as a wash on the lion's skin. Purple was employed for the fillets, the cords by which the quivers are suspended, and the inscriptions.

The Eurytus legend is given differently by various authors.¹ According to Homer, *Odyssey*, 21, 24 ff., Iphitus, the son of Eurytus, came to Heracles while searching for some horses which he had lost. Heracles entertained him as his guest, and then slew him in order to get possession of the horses. A later version makes Eurytus institute a contest in archery at which the prize for the victor was to be his daughter Iole. Heracles won, but was refused his prize, whereupon he killed Eurytus's sons (Scholiast, Euripides, *Hippolytus*, 545). The scene on our vase apparently follows this later account. Iphitus is here not the central figure, but only one of several enemies. Though only his name and that of Clytius are given, the other two figures are probably also sons of Eurytus.²

¹ Cf. the references given by Weniger in Roscher's *Lexikon*, s.v. Iphitos, §311 ff.

² Diodorus, 4, 37, gives the names of four brothers: Iphitus, Pytius (probably meant for Clytius), Toxeus, and Molion. On the Madrid amphora (see below) there are figured three brothers whose names are inscribed Iphitus, Antipholus (ANTΦΟΛΟ), and TIONO.

Representations of the Eurytus story are not very common. The following vases with scenes relating to various phases of it are known:¹

1. A Corinthian crater with Heracles, Eurytus, Iphitus, and Iole (names inscribed) represented as reclining on couches.² The scene is entirely peaceful in character and must refer to a banquet held before any trouble arose, before the contest in archery.

2. A black-figured scyphus in the Louvre with two scenes, which have been interpreted as representing respectively (a) the arrival of Heracles, Iolaus and Hyllus at the banquet of Eurytus and his sons, (b) Heracles and his two companions forcing their way into the palace of Eurytus.³

3. A white-ground cylix in the Louvre with a representation of Heracles killing Iphitus, who is reclining on a couch.⁴ The artist is evidently following Homer's version, making Heracles kill Iphitus after entertaining him as a guest.

4. A black-figured amphora in Madrid, on one side of which is depicted Heracles and Eurytus with Iole and three of his sons (names inscribed).⁵ Heracles is in the act of shooting an arrow; Eurytus and Antipholus are advancing towards him with outstretched arms, while Iphitus and another son are lying on the ground fatally wounded. This scene has been interpreted as the contest in archery,⁶ as Heracles killing Eurytus and his sons,⁷ and as both these actions combined in one.⁸ Bienkowski's interpretation seems to me the most likely.

5. Fragment of a red-figured cylix in the National Museum at Palermo, representing the contest of archery.⁹

¹ The representation on the Melian amphora, No. 477 in the National Museum at Athens, is interpreted by Collignon and Couve in their catalogue as the carrying off of Iole by Heracles. I am inclined, however, to agree with Pottier, *R. Ét. Gr.* 1895, p. 389, in his identification of the scene as Heracles and Deianeira. I want to acknowledge my obligation to Mr. Luce for calling my attention to this vase.

² Cf. *Monumenti dell' Istituto*, VI, p. 33; also Furtwängler, in Roscher's *Lexikon*, s.v. Herakles, p. 2206.

³ Cf. Pottier, *Monuments Grecs*, XXI-XXII, 1893-1894, p. 43, pl. 14.

⁴ Cf. E. Pottier, *Monuments Piot*, II, p. 53, fig. 3; Furtwängler, Roscher's *Lexikon*, s.v. Herakles, p. 2233; Perrot et Chipiez, *Histoire de l'Art*, X, p. 711, fig. 389.

⁵ Alvarez-Ossorio, *Vasos Griegos en el Museo Arqueologico Nacional*, No. 10.916, p. 39, pl. XIX; Bienkowski, *Jh. Oest. Arch.* I. III, p. 64, fig. 6; Minervini, *Illustrazioni di un vaso volcente*; Brunn, *Vorlegeblätter*, No. 2.

⁶ Furtwängler, Roscher's *Lexikon*, s.v. Herakles, p. 2206.

⁷ Cf. Bienkowski, *loc. cit.*

⁸ Cf. Hartwig, *J.H.S.* XII, 1891, p. 338.

⁹ Cf. Hartwig, *J.H.S.* pp. 334 ff., pl. XIX.

6. Fragments of a red-figured cylix found on the Acropolis, probably representing the same contest.¹

The other exterior scene is very fragmentary, most of the upper portion being missing. Enough remains, however, to identify the subject as Heracles killing Busiris and his attendants (Plates V–VI). In the centre is the altar at which Heracles was to have been sacrificed. The hero himself is beside it, striding forward in violent motion, evidently attacking his foe. He holds out his bow and arrows in the left hand, while in the right he must have wielded his club or sword. The lion's skin hangs down his back. His opponent is falling backward and has let go of his staff. Between Heracles and his opponent are the remains of an inscription KEΣ, clearly the end of a name. It refers to Heracles the *λ* was accidentally omitted; if to the Ethiopian, it is an unknown name.²

On each side of this central group is a fleeing attendant; one carries a basket which probably contains sacrificial objects. On the extreme left of the scene is a stand.

The essential elements which occur on almost all Busiris scenes—the altar, the central group of contestants, the fleeing figures to the right and left—are all here. It is unfortunate that nothing remains of the faces of the Egyptians. We cannot therefore tell whether they were of the Ethiopian type, as they are on most similar scenes, or whether they were depicted like Greeks. What is left of the garments shows that they are not the usual tunics, but himatia; so that it is possible that the whole scene was treated in Greek fashion without local color, just like the representation on the Louvre vase.³

The contest of Heracles and Busiris is a not uncommon subject on Greek vases.⁴ The following examples are known:⁵

¹ Cf. Winter, *Jb. Arch. I.* II, 1887, p. 229 f.; Furtwängler, Roscher's *Lexikon*, s.v. Herakles, p. 2234; Hartwig, *J.H.S.* 1891, XII, p. 335.

² We only know the names of the king Busiris, his son Amphidamas (or Iphidamas), and the sacrificial herald Chalbes (cf. Steuding in Roscher's *Lexikon*, s.v. Busiris, p. 835).

³ E. Pottier, *Vases antiques du Louvre*, II, G 50.

⁴ For representations of Heracles bound, ready for sacrifice, before he has begun his attack on the Ethiopians, cf. a red-figured cylix in Berlin, No. 2534, a red-figured amphora in the Bibliothèque Nationale, No. 393, and a South Italian lecythus with reliefs in the Naples Museum, Heydemann, *S. A.* 343 (illustrated in *Hallisches Winckelmannsprogramm*, VII, pl. II, 2).

⁵ A few examples have here been added to the list given by Hartwig, *Griechische Meisterschalen*, p. 53, Note 1. I am much indebted to Mr. Stephen Luce for calling my attention to the vases listed under Nos. 11 and 12 of my list.

Caeretan:

1. A Caeretan hydria in Vienna, No. 217, illustrated in *Monumenti dell' Istituto*, VIII, 16, 17.

Red-figured Attic:

2. Cylix in the British Museum, cf. Walters, *Catalogue*, E 38.

3. Cylix formerly in the Van Branteghem Collection; cf. Hartwig, *Meisterschalen*, pl. IV.

4. Amphora in the National Museum at Athens; cf. Collignon et Couve, *Catalogue*, No. 1175.

5. Amphora in the Museo Civico at Bologna, Pellegrini, *Catalogue*, No. 174; illustrated Zannoni, *Scavi della Certosa*, pl. XXIII.

6. Amphora in the Ashmolean Museum in Oxford; illustrated *Annali dell' Istituto*, 1865, pls. P. Q.

7. Hydria in Munich, Jahn, *Catalogue*, No. 342; illustrated in Furtwängler und Reichhold, *Griechische Vasenmalerei*, pl. 73.

8. Hydria in the Louvre, cf. Pottier, *Vases antiques*, II G. 50.

9. Crater in the Metropolitan Museum, New York; cf. *Museum Bulletin*, June, 1915, p. 123, fig. 3.

10. Crater, once in Ruvo, described by Heydemann, *Bullettino*, 1868, p. 158, 21.

11. Fragments of a stamnos in the Hauser Collection, published in *Jb. Arch. I. XI*, p. 191, No. 34.

South Italian:

12. Fragment of a red-figured vase in the National Museum in Naples, Heydemann, *Catalogue*, No. 2558, illustrated in *Museo Borbonico*, XII, pl. XXXVIII.

In both the interior and exterior scenes the style of the Panaitios master is unmistakable. They have the power and swing which characterize the work of this artist and which give it its peculiar value. This is shown both in the bold and well constructed compositions and in the single figures, which are not only full of life, but show a wonderful feeling for individualization. The drawing itself is masterly; it is flowing and finished and full of spirit.

The other vases painted by the Panaitios master and signed by Euphronios as potter are:

The Eurystheus vase in the British Museum (Furtwängler und Reichhold, *Griechische Vasenmalerei*, I, pl. 23).

The Theseus cylix in the Louvre (cf. Furtwängler und Reichhold, *Griechische Vasenmalerei*, I, pl. 5).

The Dolon cup in the Cabinet des Médailles (cf. *Archäologische Zeitung*, 1882, pl. 3).

The Boston cup with the komos scenes (cf. Hartwig, *Die griechischen Meisterschalen*, pls. 47-48, 1).

An unpublished cylix with athletes in a private collection.

In addition to these, Mr. Beazley attributes sixteen unsigned vases to this master, many of which bear the *καλός* name Panaitios and all of which have the same stylistic characteristics.¹

In point of style our cup resembles most closely the Eurystheus cylix in the British Museum. Besides the fundamental qualities of movement, individualization, and dramatic sense, which also connect our cylix with the other works of the Panaitios master, these two vases have many details of drawing and composition in common. In both we find the picturesque combination of black relief lines with brown inner markings and brown washes, as well as a sparing use of purple; the same type of profile with strongly marked lips and slightly upward tilt to the nose²; the same styles of beard, with either ragged outline or rows of oblique lines; and the same treatment of the folds of the garments. The drawing of the feet and ears is also similar, as well as that of the quivers. A favorite device of the Panaitios master was to give his beardless youths whiskers³; these are also indicated on the Clytius of our cylix. For the swords which are suspended in the field of the Eurytus scene compare similar ones on the exterior of the Theseus cylix in the Louvre.⁴

We may date the Eurystheus cylix and our cylix as approximately contemporary, that is, towards the end of the severe red-figured period. The eye is not yet painted in correct profile; but the pupil is placed toward the inner corner, not in the centre. Though unfortunately not so well preserved as the Eurystheus cylix, our vase is equal to it in fineness of workmanship and in vigor of conception. It is, in short, a worthy example of the most gifted of Greek vase-painters.

GISELA M. A. RICHTER.

METROPOLITAN MUSEUM OF ART.

¹ With his customary generosity Mr. Beazley has sent me a copy of this list, which has been of great help to me in my studies of our cylix. It will be published in his forthcoming book *Attic Red-figured Vases in American Museums*.

² Compare especially the profiles of the Heracles in our interior scene and of the Eurystheus in the British Museum cylix.

³ Cf. the youths on the cylices inscribed *Παναίτιος καλός* published in *Archäologische Zeitung*, 1884, pl. 16, 2, and in Hartwig, *Die griechischen Meisterschalen*, pls. 44, 2 and 46.

⁴ Cf. Furtwängler und Reichhold, I, pl. 5.

THE ORIGIN OF GLASS BLOWING.

A CRITICAL study of antique beads, begun some years ago, soon convinced me that the chronology and technique of glass beads were intimately connected with those of glass vessels. This led to a comparative study of these two groups of products of the glass-maker's art and a consideration of the various theories about the place, date, and manner of the origin of glass-blowing. Some of the results of these investigations will be set forth in this paper in a summary way, a more detailed discussion being in preparation.

The well known paintings found in Egyptian tombs of the VI and XII Dynasties, which have been interpreted as representing glass-blowing, led to the opinion, for a long time accepted as conclusive, that the art of blowing glass vessels from a glass bubble was known to the Egyptians in very remote times. Of late years, however, doubt has been thrown upon the correctness of this theory, principally by Flinders Petrie, for the following reasons:

(a) No glass of any kind has been found in Egyptian tombs of the VI or XII Dynasties. The very earliest dated specimen is a glass bead with the name of Queen Hatshepset, and this is properly assigned to her reign in the XVIII Dynasty. Glass beads are absent in the XII Dynasty, but exceedingly numerous in the XVIII Dynasty, the earliest types being imitations of similar types made of paste.

(b) No vessels of blown glass have been found in Egyptian tombs or excavations earlier than the Ptolemaic period, although innumerable specimens and fragments of glass vessels have been found which belong to the long period of over one thousand years between Thothmes III and the Ptolemies.

(c) All these glass flasks, bottles, and vases we now know to have been either moulded or formed by hand over a core of soft paste or clay, the core afterwards being scraped out. This discovery we owe to Flinders Petrie, and it can be confirmed by the

examination of the glass fragments excavated by the expedition of the Metropolitan Museum in the Palace of Amenhotep III at Thebes.

(d) The earliest vessels of blown glass date from the time of the Ptolemies. They consist of small flasks with short necks. The earliest I have seen was found with a Greek vase of the third century B.C.

These facts seem to me conclusive, and we are forced to doubt either the interpretation of the Egyptian wall paintings or their chronology, as it is absolutely inconceivable that no specimens of blown glass, or fragments of such vessels, should have come down to us had they actually been made. Nor is it likely that the Egyptians should have continued to make glass vessels in the old way after they had discovered the art of making them in a new, simpler and cheaper way. And this is proved, because after the appearance of the earliest flasks of blown glass, the old technique was abandoned, a technical revolution in fact being the result of the new discovery of blowing glass. So far as I know, no glass vessel made in the old way over a core has been found to be of a later date than the reign of Augustus.

An examination of the blown glass flasks of the Ptolemaic period revealed the interesting circumstance that they were nearly all made of two types of mosaic glass and not of monochrome glass ornamented afterwards. This fact seemed to me of great importance, because it is easily understood that mosaic glass cannot be blown from a fused glass bubble, as the melting of glass would have so diffused the pattern as to make it unrecognizable. The earliest blown flasks must have been produced in some other way. But before we enter upon that point it will be necessary to define the two kinds of mosaic glass used in the manufacture of the flasks.

Dragged Mosaic Glass.—This is one of the oldest types of mosaic glass, the type from which nearly all the flasks and vases of the XVIII Dynasty glass is made as well as most other ornamented glass vessels before the Ptolemaic time. Some of this glass possesses a fern and feather pattern and is almost too well known to need a lengthy description. I will state, however, that the technique used in producing the pattern was as follows:—The flask was made of monochrome glass, but before it had time to cool a spiral band of glass or glass thread was wound about the flask from neck to base. Before this band had time to solidify

it was combed or raked at intervals in one or two directions with a hook or point of metal. This raking carried the bands or threads in different directions, changing them into streamers or leaves, often carrying the topmost ones down to the bottom of the pattern in such a manner that one end of the streamer remained attached at the top while the loosened end diverged downwards, or vice versa. The pattern was finished by pressing it into the matrix of the bottle by rolling, and the finer specimens were afterwards, when cool, ground off and polished. The effect was a closed leaf and feather pattern similar in appearance to the finest mosaic glass made in any other way.

Of this kind of glass we can separate several varieties for which I propose distinct names.

1. *Arcades*.—The strokes separating or bending the bands are parallel to each other, beginning above and carried downwards. The result is a horizontal line of arches in upright position. If the strokes had been sufficiently heavy the arches are separated from each other, but if the strokes did not penetrate sufficiently deep, the arches connect horizontally.

2. *Festoons*, also called inverted arches.—The technique is the same as in the last variety, but the strokes pass from the lower part of the bottle towards the neck. The result is a number of more or less horizontally connected inverted arches or festoons, having the appearance of a row of hanging garlands, such as have been used since antiquity for the decoration of flat surfaces or in connection with cupids, the graces and dancers.

3. *Foliate*.—Fern and leaf pattern, plumate glass. The technique differs only in the direction of the strokes, which alternate from top to bottom and from bottom to top. The resulting ornamentation is a series of horizontally corresponding leaves which sometimes connect in a horizontal line, but sometimes stand diagonally in such a manner that one end of an individual leaf ends near the top of the glass vessel while the other end is near its base.

4. *Semifoliate*.—The band spiral was first divided by downward strokes from top to bottom. Afterwards intermediate strokes were made from bottom upwards, one in each arcade. But instead of cutting through all the arcades the stroke was halted halfway up, leaving the upper arcades intact, the lower ones having been broken up into leaves.

5. *Waves*.—The band spiral was first rolled into the matrix

and then made wavy by light up and down strokes. The crests and valleys remain rounded and the wave bands are more or less separated.

6. *Zigzags*.—The band spiral was wound close, so that the tiers touch, and then rolled into the matrix. It was afterwards zig-zagged by strong and deep strokes which caused both crests and valleys to be angular as in ordinary zig-zag patterns. The close winding of the band and the previous rolling in prevented irregularity in the design, and the impossibility of the formation of leaves with long, tapering points.

Beads Made of Dragged Mosaic Glass.—Beads made of this kind of glass are common in the XIX–XX Dynasties, and some were found in the Palace of Amenhotep III of the XVIII Dynasty. The variety continued to be made, the shape of the beads varying in different periods like the details of the technique and the colors of the glass. In the eighth and seventh centuries B.C. the favorite form is a cylinder. In the fourth and third centuries B.C. the spherical form is predominant. In the sixth century A.D. the cylinders come once more into fashion, but spherical beads are found in about the same quantity.

Earliest Blown Flasks of Dragged Mosaic Glass.—As has already been stated, all the old Egyptian flasks with dragged ornamentations were moulded or core-dipped, and this practice continued in use until the Ptolemaic period. About the third or second century B.C. we begin to find blown flasks with this ornamentation. All these earliest flasks are small, three or four inches high, and with a more or less globular or egg-shaped body. They possess the characteristic that the festoons are indistinct, irregular, and more or less confluent on the body, while they are better defined as we approach the neck. It seems thus evident that these vessels were not given their pattern after they had been shaped, but before the body had been blown. If these flasks had been ornamented in the same manner as the old Egyptian flasks or as all dragged flasks down to that date, it would be difficult to explain the sudden degeneration of the pattern at a time when the glass technique had suddenly emerged from a degenerate period into a perfect one, remarkable for the invention of columnar mosaic glass and for the perfection of several other types. But before we discuss this subject we will consider another type of mosaic glass.

Stratified Mosaic Glass.—This glass appears after the fifth

century B.C., the earliest specimen having been found with a Greek vase of the third century B.C. After that time the specimens made of this glass multiply rapidly and characterize the second half of the Ptolemaic period, continuing to be made several centuries afterwards.

This glass is made up of numerous parallel layers of glass of different colors which penetrate from surface to surface, like the units in a pack of playing cards. The layers vary in thickness, the opaque white being used to separate other colors from each other, the white sheets being generally much narrower than the colored ones, sometimes looking like hair lines, while the others are often a centimetre thick. The object of the white sheets was to reflect the colors of the other sheets from the depth of the glass matrix.

The technique consisted in annealing strips of different colored glass by fusion, a technique that could not have offered any great difficulties, and the type seems to have been quickly perfected. In the bottle found with the Greek vase, we find the strips to be violet, white, gold glass, cobalt blue, and emerald green. The gold glass was made by enclosing thin sheets of gold leaf between two sheets of transparent glass and then fusing and rolling them flat.

Beads Made of Stratified Mosaic Glass.—These do not appear until after the fifth century B.C. and, so far as I know, the same chronology applies to the beads as to the crude glass and to the flasks. We can distinguish three distinct types of these beads, which it is of importance to define.

1. The bead is made of a sheet of stratified mosaic glass which has been rolled up on itself, in such a manner that the strips and stripes have remained more or less parallel. A seam can often be seen where the margins of the sheet meet. In this variety the junction layers do not form any figures or fields, but if the end stripe is of the same color at each end, the meeting of the two will of course form a thicker stripe.

2. The stripes run in various directions so that the place of junction of the two margins of the glass, the sheet having been rolled up on itself, form a pattern. The simplest pattern consists of a large, egg-shaped, central field around which the other stripes follow concentrically. The technique in its simplest form consisted in bending a stratified and striped bar of such mosaic glass from the centre of its long axis, just as we fold up a necktie, the

centre forming an end-loop, and the two ends, now joined, forming the other extremity. Or if two bars are had with the same succession of colors, but with the stripes running diagonally, in one from left to right and in the other from right to left, the junction might be made to present a central diamond-shaped field, around which the other stripes are arranged in succession. The same effect could also be produced if the original glass was made up of sheets of glass meeting to form a zig-zag or field-and-band pattern.

3. The third type does not show any junction of two margins of a sheet and was made by simply perforating a bar of stratified glass with longitudinal or zig-zag stripes, or by packing zig-zag layered glass around a longitudinal axis.

Earliest Blown Flasks of Stratified Mosaic Glass.—The earliest blown flasks occur in the Ptolemaic period about the same time as the earliest blown flasks of the plumate glass. They show the peculiarity that the strips of the matrix are much thinner in the neck, running parallel from the bottom to the top of the neck, and sometimes continuously from the top of the neck to the bottom of the flask. In other flasks we see the stripes meet on the body of the flask, then turn in a loop and pass upwards through the whole length of the neck. In some flasks we have the stripes parallel in the neck, but at the junction of the neck and the body they abruptly spread out and grow in depth while widening laterally. Using these characteristics we can distinguish three types which it is of importance to define.

(a) The stripes are more or less parallel from neck to base, and the bowl or body of the flask is without field, loops and curves. Junction lines are present.

(b) The stripes are parallel in the neck and spread abruptly over the body, forming either a loop or arch on the body or continuing to the bottom of the flask. Junction lines are visible between the patterns.

(c) The body shows no junction lines between the parts of the pattern, which is more or less unsymmetrical.

Earliest Technique of Glass Blowing.—It is of course apparent to any one that mosaic glass does not lend itself readily to be blown from a bubble, as this would so distort the ornamentation as to make the pattern useless and perhaps even disagreeable to the eye. In most instances we should find that the original pattern of the mosaic glass had been completely lost, and in the

most favorable cases it would have been much disturbed. How then were these flasks produced? In my opinion by blowing out a bead or a tube intended for a bead, after the farther end of the tube had been closed. The technique differed in some types and shapes, but the principle was the same. First a tube of mosaic glass was made, either by piercing a hole through a solid bar of mosaic glass, or by folding a sheet of mosaic glass so as to form a tube, or by fusing several strips of mosaic glass longitudinally after first having doubled each unit on itself. The following are the principal technical types:

Dragged Glass.—A tube was made of a plain glass matrix and ornamented with a succession of rows or rather spirals of arches, festoons, or foliations, from one end of the tube to the other, according to the taste of the artisan. Next the distant end of the tube was closed, then the tube was heated to the point of proper liquefaction. The next step was to blow in the distant cool end of the tube with or without a mouth piece. The result would be that the pattern would remain more perfect and regular on the neck of the flask, but would spread out, and the individual stripes would widen out and become more irregular as the bowl or body widened. Where the tube had been closed a thick lump would probably remain, at least in a primitive attempt. Such is actually the case, for a small flask in the possession of Kouchakji Frères shows an exceptionally thick square lump at the bottom of the flask, while the bowl of the flask is exceptionally thin.

Stratified Mosaic Glass.—The flasks have a striking similarity to beads made of the same type of glass, and it seems probable that the flasks resulted from the effort of the artisan to produce flasks from the same material from which his beads were made, because I think the beads came first, the flasks later.

Simplest Form, Longitudinally Striped.—The artisan made a tube of striped mosaic glass by rolling up a sheet so that the stripes would all remain longitudinally parallel. The tube was closed and the blower blew into the distant end. The result would be a flask with longitudinal, more or less parallel stripes, wider on the bowl, narrower on the neck. In closing the distant end of the tube the stripes or strata were often twisted spirally, thus adding beauty to the pattern.

Such flasks are in many collections, the finest example being figured in colors by Anton Kisa in his work on glass (*Das Glas im Altertume*, pl. II, fig. 3), well known as the principal work on

antique glass. In this beautiful flask we see the colored bands proceed from top to bottom in a slight spiral, but in a general way perpendicular to the base. It has a remarkable similarity to many beads of that period which seems to have extended into the first century A.D.

The Stripes Form Loops on the Bowl.—The technique in this pattern is more complicated and it is necessary to give a detailed description of a typical example of such a flask. The finest specimen I have seen is in the private collection of Kouchakji Frères, who have permitted me to study it at my leisure. The flask is $4\frac{1}{2}$ inches high and 11 inches in circumference, the bowl being more or less turbinate on account of the projecting girdle region. The neck is short and narrow. The matrix is deep blue with fine stripes of white which form a horizontal set of six wide loops in the girdle region, the ends of the stripes that run upwards being parallel in the neck. Below the girdle region we see a festoon pattern of five or more vertical rows of white festoons, which also correspond to the five loops above, the upper ends of the festoons penetrating into the angles formed by the loops, and between the five upper loops. An examination with a magnifier shows that the matrix is made up of a series of alternating strata, perpendicular to the surface of the bowl. The white strata are like hair lines, the blue much wider. There are five white and five blue strata in each loop, all standing on end and appearing to vanish down in the matrix of the glass in the manner seen in many types of stratified and columnar mosaic glass in which the minor units are opaque and the matrix, or grosser units, translucent. The festoons show the same characteristic, and when we observe the base or bottom we see that there is a twist of four such strata in the navel. The technique is absolutely faultless, and was as follows:—

Five long strips of stratified glass were made, each strip being twice as long as the loops, each consisting of five layers of thin, white, opaque glass and five layers of thicker, blue glass. These strips were doubled lengthwise, forming five separate loops, like pears with long slender necks. These loops were placed in a horizontal row, fused side to side and then rolled into a tube, which naturally was wider in the loop end than in the end of the parallel stripes. In order to cause the loops to appear on the bowl above the girdle region, the tube had to be lengthened towards the base. And this was done by first making a long

strip of stratified glass of two white and two blue layers, retaining the same proportions of thickness as in the loops. This strip was twisted spirally into a tube of the same thickness as the loop tube and the two tubes were fused together so as to form a longer tube. The lower twisted end was closed in twisting, as the pattern shows distinctly. We had now a single long tube in which the future pattern was in a compressed state and all that was needed to bring it out as we see it on the bowl was to blow in the open free end of the tube while the rest of the tube was brought to fusion. Finally the lower part was surface dragged.

Another yet more complicated pattern is seen in the Evan Gorga collection in Rome. This bowl-flask is of stratified glass in white and violet layers. It has four loops on the girdle, but possesses the characteristic that the central field in each loop consists of *plumate mosaic glass* of alternating leaves of white and yellow, they being so arranged that they could not possibly have been produced on the bowl *after this had been blown out*. In fact the plumate mosaic fields consist of fragments of *already made* plumate glass evidently taken from another broken bowl and fitted in when the four loops were rolled into a tube, the white leaves ending sharply and abruptly against the innermost band in the loop.

These two types being the most complicated and thus most difficult to explain satisfactorily, all others may now, in order not to lengthen this article too much, be deferred to a future time, and it remains only to summarize the conclusions based upon the arguments set forth above.

In regard to the actual blowing of these earliest blown flasks, we can assume three different methods.

The cylinder of glass was blown into directly without a mouth piece, or a metal tube was used. If this metal tube was inserted deeply in the cylinder, the neck of the bowl would correspond to the length of the tube and the bowl would spread out abruptly, as, for instance, in the Perugia flask or in that of the Metropolitan Museum. Both are rarer than the next form. If no metal pipe was used, or if it was not deeply set in the glass tube, the glass bowl would widen out gradually and carry the pattern along. Such flasks are very common in collections.

In regard to flasks which show no meeting seams between the loops and which were made from a solid bar of mosaic glass, the technique was more or less the same. These flasks are generally

much thicker than the others, but their capacity is small. Some seem to have been bored out while fusing and only slightly enlarged by blowing.

If the correctness of my investigations set forth in a superficial manner in this paper is sustained, we may conclude that:

1. There are two distinct types of glass-blowing, one from a tube of glass; one from a bubble of melted glass. The tube-blowing is the earliest, invented in the Ptolemaic period.

2. The earliest blown vessels are made of mosaic glass which could not be blown from a bubble, and the only way to explain their nature is to assume that they have been blown from tubes.

3. The discovery of glass-blowing was the result of the effort of the artisan to make flasks out of the same kinds of mosaic glass from which he made his beads. The various steps leading to glass-blowing from a bubble would be about as follows:—Mosaic glass; mosaic glass beads; cylinder made of mosaic glass; closing the cylinder at one end and blowing in the other; using a metal tube as mouth piece; taking a film of fused glass on the end of the pipe and producing a bubble.

4. No blown glass vessels existed before the Ptolemies. During this period the four great events in the glass industry were the discovery of columnar mosaic glass; the dipped and cut-off rod; the blowing of glass first from a cylinder and later from a bubble by means of a metal tube or pipe.

GUSTAVUS EISEN.

FRAGMENT OF A VASE AT OXFORD AND THE
PAINTER OF THE TYSZKIEWICZ CRATER
IN BOSTON.¹

THE fragment reproduced in Figure 1 came from Cervetri and was part of a pelice. The subject is made clear by a pelice in the Castellani collection at Rome. On the Castellani vase a workman is seated holding a helmet in his hand and polishing it with a file; facing him stands Athena, bareheaded, with spear and shield; at his back stands another Athena, this one helmeted, a spear in her left hand, her right extended holding out a crest. Enough of the Oxford vase remains



FIGURE 1.—FRAGMENT OF A PELICE IN OXFORD

to show that it was a replica,

by the same painter, of the Castellani pelice; an armourer is making a helmet for Athena.

But why are there two Athenas? I take the Athena at the right-hand side of the picture to be a *statue* of Athena, complete but for the helmet; the Athena at the left is the goddess herself, who is present in the workshop and ready to help the helmet-maker, just as she is found in a potter's shop on the late archaic hydria in the Caputi collection (*Annali*, 1876, pls. D-E), and at

¹ I owe my thanks to Mr. D. G. Hogarth, Mr. L. D. Caskey, Mr. A. H. Smith, Dr. Waldhauer, and Dr. Blinkenberg for their kind permission to publish vases in Oxford, Boston, London, Petrograd, and Copenhagen.

an earlier period on the craftsmen cup by the Euergides painter in the Acropolis collection at Athens.¹

There are two other vases with pictures of helmet-makers. One is the pretty little box with the love-name Thaliarchos, in the Petit Palais at Paris (Klein, *Liebl.* p. 88), which resembles the work of Epiktetos; the other the ripe archaic cup in Oxford (*J.H.S.* XXIV, 1904, p. 385; F.R.H. III, p. 81), which is in the



FIGURE 2.—CALYX CRATER IN BOSTON, FROM THE TYSZKIEWICZ COLLECTION; SIDE A

same style as some of those cups which bear the love-name Lysis. The two pelicae are earlier than the cup, a little later than the box; they must have been painted at the beginning of the fifth century.

¹ See *J.H.S.* XXXIII, 1913, p. 353, No. 44. Athena is sitting opposite the vase-painter who is figured in *Jb. Arch. I.* XIV, 1899; I think he is drawing her picture.

I shall call the anonymous artist who painted them, after his best work, the painter of the Tyszkiewicz crater in Boston (Figs. 2 and 3).¹ The Tyszkiewicz crater is well known; it has been published by Robert and by Froehner, and reproduced, for comparison with the Aeginetan pediments, in Furtwängler's *Agina*. It represents two scenes from the Trojan war: on one



FIGURE 3.—CALYX CRATER IN BOSTON, FROM THE TYSZKIEWICZ COLLECTION; SIDE B

side Achilles and Memnon, with their mothers encouraging them, are fighting over the dead body of Melanippus; on the other, Diomedes, assisted by Athena, strikes down Aeneas, who is protected by Aphrodite. A band of flower-pattern above and below, palmettes between the pictures, tongues round the handles

¹ There is a good deal of brown inner marking which is not indicated in Robert's drawing and does not come out in the photographs.

and at the base of the vase; the persons have their names inscribed beside them; the shape is the early, massive kind of calyx-crater.

The Tyszkiewicz crater has been attributed to Douris, to the Kleophrades painter, and to others; I myself, some years ago connected it with the wrong group of vases.¹ I now give a list of the Tyszkiewicz painter's works.

I. Calyx-crater.

1. Boston, 97. 368. From Vulci. Figures 2 and 3. Robert, *Scenen der Ilias und Aethiopis*, plates; Froehner, *Coll. Tysz-*



FIGURE 4.—STAMNUS IN THE BRITISH MUSEUM; SIDE A

¹ *J.H.S.* XXX, 1910, p. 38, note 5 (2). The four vases there mentioned are by the painter of the Aegisthus vase in Bologna. His works are the following: Column-craters in Bologna (230; Zannoni, *Scavi della Certosa*, pl. 79, 1-3; A, Death of Aegisthus; B, Komos) and in Vienna University (A, Man and naked woman; B, Komast; mentioned in *Arch. Anz.* 1891, p. 179, No. 2). Calyx-craters in the Louvre (G 164; *Monumenti*, 1856, pl. 11; A, photograph by Giraudon; A, Apollo and Tityus; B, Woman and man) and in the Hofmuseum at Vienna (619; *Arch. Zeit.* 1877, pl. 14; A, Man giving meat to boy; B, Youth). Stamni in the Vatican (*Mus. Greg.* II, pl. 19, 1; A, Nike running to resting man; B, Men and women) and in Florence (3994; A, Nike flying to altar, between two boys; B, Women). A pelice in London (Brit. Mus. E 375; *Él. Cér.* I, pl. 50; A, Zeus pursuing woman; B, Woman and youth), and another which was at one time in the Munich market (*Kunstbesitz eines bekannten norddeutschen Sammlers*, 4 Abt., Helbing, 22 Feb., 1910, pl. 21, No. 816; A, Woman seated between two others; B, Woman and two youths). A hydria in London (Brit. Mus. E 197; Komos; Youth pursuing woman), an oenochoe in Munich (2449; Jahn, 262; Man, and boy with leg of meat), and a neck-amphora with convex handles in Naples (A, Two youths, one with a stick; B, Youth).

kiewicz, pls. 17-18. *A*, Achilles and Memnon; *B*, Diomedes and Aeneas. Love-name Lacheas; Klein, *Liebl.* p. 96, No. 7.

II. Column-craters; the pictures framed.

2. Munich 2370 (Jahn, 746). From Magna Graecia. Stackelberg, *Graeber der Hellenen*, pl. 41. *A*, Heracles and Pholos; *B*, Maenad and sileni.

3. Rome, Villa Giulia (Helbig, 1808 G). From Nepi. *A*, Heracles escorted by Hermes, Dionysus, and a silenus; *B*, Komos.

III. Volute-crater; the pictures on the neck, the body black.

4. Syracuse. From Syracuse. *Notizie degli Scavi*, 1891, p. 412. *A*, Theseus and the Bull; *B*, Heracles and the Lion.



FIGURE 5.—STAMNUS IN THE BRITISH MUSEUM; SIDE B

IV. Stamni.

5. London. Brit. Mus. E. 443. From Vulci. Gerhard, *Auserl. Vas.* pl. 54. From new drawings, Figures 4 and 5. Gigantomachy; *A*, Dionysus and Giants; *B*, Apollo and Giants.

6. Petrograd, 643 (Stephani, 531). Details Figures 6 and 7. *A*, Peleus and Thetis; *B*, Nereids running to Nereus. The black line on the right arm of Figure 6 is a "pentimento." With Figure 7 compare the much more careful figure of Aphrodite on the Boston crater.

7. Formerly in the Roman market (Hartwig). *A*, Hermes escorting Aphrodite and Athena ("Judgment of Paris"); Aphrodite with dove and flower, Athena with two spears; Hermes with kerykeion; *B*, Three women.

I am inclined to think that the stamnos with Theseus and the Bull, formerly in the Roman market and now lost (Gerhard, *Auserl. Vas.* pl. 162, 1-2), may be by the Tyszkiewicz painter, but Gerhard's picture is too poor for me to be certain.

V. Hydriae-calpides: (a) The picture on the shoulder, framed.

8. Formerly in the Jekyll collection. Naked women washing.

9. London. Brit. Mus. E 165. From Vulci. *Él Cér.* I, pl.

3. Gigantomachy.



FIGURE 6.—DETAIL OF STAMNUS IN PETROGRAD

(b) The picture on the body, framed.

10. Louvre G 53. From Vulci. Pottier, *Album*, pl. 94. Peleus and Thetis.

11. Munich 2425 (Jahn, 283). Gerhard, *Auserl. Vas.* pl. 169, 1-2; small, *Monumenti*, I, pl. 26, 26. Menelaus leading Helen away.

(c) The disposition of the picture not known.

12. Formerly in Lord Pembroke's collection. *Gaz. Arch.* 1879, pl. 6, *Jb. Arch. I.* XXVI, 1911, p. 158. Winged goddess serving gods with wine.

VI. Nolan amphora with triple handles.

13. Formerly in the Jekyll collection. *A*, God served with wine by two winged goddesses; *B*, Goddess served with wine by winged goddess, and women with torches. One of the earliest real Nolan amphorae.

I think it likely that the Nolan amphora in the Thorvaldsen Museum at Copenhagen (99; *A*, *Él. Cér.* II, pl. 99; *A*, Artemis and Actaeon. *B*, Silenus carrying another pickaback) is also by the Tyszkiewicz painter.



FIGURE 7.—DETAIL OF STAMNUS IN PETROGRAD

VII. Pelicae; the pictures framed.

14. Vatican. From Vulci. *Mus. Greg.* II, pl. 62, 2= Gerhard, *Auserl. Vas.* pl. 161. *A*, Theseus and the Minotaur; *B*, Youth, man, and woman.

15. Rome, Villa Giulia, 1129. From Falerii. *A*, Seated woman holding wreath, and youth; *B*, Woman holding wreath, and man.

16. Boulogne, 134. *Le Musée*, II, p. 279. *A*, Youth with panther offering a cock to a boy; *B*, Man with hare and boy with cake and leg of meat.

17. Copenhagen. *A*, Figure 8. *A*, Man offering lyre to youth; *B*, Man with purse, and youth.

18. Formerly in the Jekyll collection. *A*, Man with phiale and woman with oenochoe; *B*, Man with phiale and youth with oenochoe.

19. Louvre, G 237. *A*, Woman with ladle and cup, and seated youth with cup and stick; *B*, Woman seated with wreath, and youth.



FIGURE 8.—PELICE IN COPENHAGEN

20. Rome, Castellani collection. *A*, Helmet-maker making a helmet for a statue of Athena; *B*, Man and seated youth.

21. Oxford, 1911.620, fragment. From Cervetri. Figure 1. Part of a replica of the last. Two other fragments may belong to the same vase, and are at any rate by the same painter:

1913.146 (raised hand and part of woman holding spear and shield) and 1911.625 (part of a head and raised hand).

Fragments (of pelicae?)

22. Athens, Acropolis, two fragments: G 331 (head of youth l.) and another (head of man, in chiton and himation, l.). From Athens.

23. Athens, Acropolis, G 56 b (young soldier running). From Athens.

VIII. Amphora (shape as *Burlington Catalogue*, 1904, pl. 99, No. 83); the pictures framed.

24. Orvieto, Conte Faina, 33. From Orvieto. A, Zeus and Ganymedes; B, Youth offering wreath to boy with hoop.

IX. Guttus.

25. Boston, 13.169. From Cervetri. Hero and his mound.

X. Fragment.

26. Athens, Acropolis. From Athens. Ajax and Cassandra at the statue of Athena (blazon Gorgoneion).

Few of these vases have any merit. The man draws badly. But size, shape, and composition make the Tyszkiewicz crater an imposing thing; and there is Homeric quality in the giant, bull-like fighters; the Homeric of the eleventh book of the *Iliad*.

Although the drawing is worthless, the Boston guttus is a remarkable piece. It is the earliest guttus, I think, we possess, and certainly the most interesting, so far as subject goes. A bearded hero with spear and shield is rising out of a large mound; attached to the mound, or leaning against it, a discus, a pair of halteres, two fillets, and three acontia; a vivid picture of the origin of athletic contests.

There are still a few vases which resemble these twenty-six in many ways, but seem to be the work of a pupil, rather than of the Tyszkiewicz painter in his later days. I shall call this pupil the painter of the *Iliupersis* in Rome.

I. Column-craters: (a) The pictures framed.

1. Rome, Villa Giulia (Helbig 1793 f). From Falerii. Milani's *Studi e Materiali*, III, pp. 160-161. *Iliupersis*. A, The Death of Priam; B, Woman attacking youth.

2. Corneto, Conte Bruschi. From Corneto. *A*, The Return of Hephaestus; *B*, Komos.

3. Petrograd. Inv. 14119. From Kertch. *A*, Dionysus and two maenads; *B*, Sileni pursuing maenads.

(b) The pictures not framed.

4. Palermo. *A*, *Bull. della Commissione di Antichità in Sicilia*, 1872, pl. 5, fig. 1. *A*, Youth with phiale and woman with oenochoe; *B*, Youth.

5. Syracuse. *A*, Poseidon pursuing woman.

II. Pelice.

6. Syracuse. From Gela. *A*, *Mon. Ant. Lincei*, XVII, p. 178. *A*, Man with purse and woman; *B*, Youth and woman.

J. D. BEAZLEY.

OXFORD.

STUDIES IN THE HISTORY AND TOPOGRAPHY OF
LOCRI. II¹

BUMELITEIA

THIS small settlement, known from the *ethnikon*, Βουμελιταιῆς (I.G. VII, 3078; between 221 and 216 B.C., see above p. 53, n. 1), clearly lay east of the Copaic Lake, as its position in the list of towns mentioned indicates. Oberhummer (*Pauly-Wiss.*, s.v.) places the village in Boeotia; Beloch (*Griech. Gesch.*, III, 2, p. 360) in East Locris in the neighborhood of Larymna. Both of these scholars knew only of this inscription, but in the work of the late geographer Hierocles (shortly before 535 A.D., K. Krumbacher, *Byz. Litteraturgesch.*,² p. 417; Kiessling, *P.-W.*, VIII, col. 1487) the town appears in the following connection (pp. 644 f.): "Οπους, Ἀνάστασις, Ἀδελφος, νῆσος Εὐβοία, Ἀνθοδών (=Anthedon), Βουμελιτά [var. Βουμέλιτα], Θέσπιαι, etc. This record of Hierocles is confirmed by that of the *Notitia Episcopatuum* published by C. de Boor, (*Zeitschr. f. Kirchengesch.*, XII, 1891, pp. 509 ff.).² Here, under the eparchia of Hellas, appear, 740 ὁ Ὀπης (sic, = Opus),³ 741 ὁ Ἀναστασίας, 742 ὁ Βουμελιτον

¹ See pp. 32-61.

² This work as a whole is not likely to be later than the reign of Leo III (716-741 A.D.), and may be a few decades earlier even than that; see H. Gelzer, 'Die kirchliche Geographie Griechenlands vor dem Sklaveneinbruch,' *Zeitschr. f. wiss. Theol.*, XXXV, 1892, pp. 432 ff. It seems to be a record of the Greek cities in the post-Justinian epoch before the pestilence and the great Slavic invasion of 746 A.D., and contains many names of bishoprics which are not recorded in the decrees of early councils or in the Byzantine period. This is, of course, to take the *Notitia* at its face value as a record of bishoprics. L. Duchesne, 'Les anciens évêches de la Grèce,' *Mél. d'Arch. et d'Histoire*, XV, 1895, pp. 375 ff., has made a very strong case against the validity of this *Notitia* as an official document, and it must be admitted that it is difficult to explain so extraordinary (and merely temporary) an increase in the bishoprics of this single province. However, for our purpose it makes little difference whether Bumeliteia was a regular bishopric or not; that it was an important place in the early Christian period I think I shall make plausible below.

³ For the numerous errors cf. Gelzer, *op. cit.*, pp. 420, 434 ff.

(sic), 743 ὁ Ἀντιέδου (sic, = Anthedon), 744 ὁ Θιβαῖδου, etc. Now the geographical order which is exact and carefully followed (736-739 = Thermopylae, Scarphea, Elatea, Abae), and the comparison with Hierocles (who may have been following a similar list of Bishops from an earlier period—so Ramsay for Phrygia, and Gelzer, *op. cit.*, p. 424) make it quite certain that Bumeliteia, between Opus and Anthedon, was meant. This is the best of evidence that Bumeliteia had overshadowed Larymna some time before the age of Justinian, else Larymna would have



FIGURE 8.¹—MARTINO; THE SITE OF BUMELITEIA

been mentioned. Some considerable confirmation of the importance of Bumeliteia as a centre of early Christianity is the extremely large number of ancient chapels in the environs of Martino, where Bumeliteia, as appears below, must be located, while Larymna has very few, the only large one being the ruined church of Hagios Nikolaos between Upper and Lower Larymna. Nowhere in Greece did I find them so plentiful as here at Martino.²

¹ Figures 1-7 are in the previous article, pp. 32-61.

² In addition to the full complement of churches in the modern village of Martino, there are Hagios Georgios and Hagia Panagia to the southeast, which were important enough to rebuild after the great earthquake, and besides

The view of Beloch is, therefore, I believe, correct, although he had nothing to argue from but the order of names in the inscription. We are far better informed about the geography of Boeotia than about that of East Locris, especially this portion of the country, and an obscure locality is more naturally to be looked for in Locris than in Boeotia. Finally, the name is significant. It must mean "Ox-honey-town."¹ The prefix *βov-* was frequently employed by the Greeks, as is well known, in colloquial compounds to indicate large quantity, or mass, or degree, quite as colloquial English uses "horse" in "horse-radish," "horse-laugh" and the like.² Now apiculture is one of the chief, in fact almost the only notable industry of modern Larymna. While visiting the springs in the Revma below Upper Larymna I was struck with the number of honey bees, and on leaving Larymna for Martino I noticed at the distance of about half a mile west of the town a large number of bee houses gathered in one spot, and was told that the whole southern portion of the rocky and barren Aëtolimni peninsula, only small spots of which may be cultivated, or will support even goats, provides excellent and abundant pasturage for bees. "Ox-honey-town" must therefore have been in this general region.

As there is no other location along the coast for a second town in the Aëtolimni peninsula, Bumeliteia must be sought for near the modern Martino (see below), where remains of an ancient settlement have been discovered. Since Kastri (Larymna), as well as two of the lower mills, was subordinate to Martino

that I was shown at least three other ruined chapels between these two, and visited three more as I left town on the road to Malesina. From one, Hag. Demetrios, I secured some new inscriptions, *A.J.A.* XIX, 1915, p. 322. I regret now that I did not make a careful record of the chapels, but I feel sure that there are no less than eight, and there may be ten or a dozen within half a mile of the village of Martino, most of them, of course, mere piles of stones in consequence of the earthquakes of 1894 when every single structure in this vicinity was thrown down, and a few now entirely abandoned.

¹ Oberhummer and Beloch write Bumeletaia, which is indeed quite possible from the *ethnikon*. But, as in the case of the closest parallel, Meliteia in Phthiotis, Dittenberger has convincingly shown (*Hermes*, XLI, 1906, pp. 169 ff.) that the *ethnikon* was *Μελιταιεύς*, while the town name was *Μελίτεια*, and has given other examples of this same variation, I have thought it safest to postulate the *-εια* ending in this instance. Of course the form *Βουμελιττά* [*Βουμέλιτα*] in Hierocles, and the even more barbarous form in the *Notitia* have no bearing on the correct ancient usage.

² See on this use especially J. P. Postgate, *Journ. of Philol.*, VIII, 1879, pp. 116-21, and Herwerden, *Lex. Graec. suppl. et. dial.*, s.v. *Βουπρήνες*.

in Ulrichs' time (see above p. 34, n. 2), it seems likely that this relation represents a much older adjustment. We may, with considerable plausibility, conjecture that sometime after the beginning of our era, very likely during the chaotic conditions which prevailed throughout a good part of the third century before the restoration under Diocletian, many if not all of the inhabitants of Larymna retired to Bumeliteia, tilling the district from that safe point in the hills, only a few miles distant. This transfer must have taken place before the time of Justinian and probably before that of Diocletian even (see above under "Larymna," pp. 54 ff). Larymna ceased to exist, therefore, until the modern town sprang up after the war of independence.

As for the location and remains of the place, Ross was, I believe, the first to speak of them (*Reisen d. Königs Otto*, u.s.w. Halle, 1848, I, pp. 98 ff.)¹ M. de Koutorga visited the spot in 1860 (*R. Arch.*, 2nd Ser., 1860, ii, pp. 394 ff.), but contented himself with repeating the description by Ross, and arguing for an identification with Cyrtone.² Paul Girard saw the place in 1877 (*De Locris Opuntiis*, Thesis, Paris, 1881, pp. 36 ff.), and gave a short description, noting especially that the chapel Hagios Georgios is in large part composed of ancient marble fragments, and accepting Koutorga's identification. Finally Lolling visited the place, copying a number of inscriptions, which Dittenberger (*I.G. VII*) classified under Hyettus, and made a brief note of ruins there in Baedeker (4th. ed. [English], 1909, p. 187). The church of Hag. Georgios, frequently mentioned as the repository of inscriptions, on the site of these ruins, was destroyed in the earthquake of 1894, and rebuilt in 1895. For the church and the yard wall free use was made of the ancient hewn stones on the site, with the result that I could not locate, in the few minutes which I had at my disposal, before night fell, the wall that Ross

¹ His description runs as follows: "Hinter dem Dorfe, auf der Südostseite (Girard is wrong in calling them "meridiem versus") fand ich auf einem kaum sechzig Fuss hohen Felshügel ausgedehnte Spuren eines festen Städtchens; am Rande der Höhe Fundamente der Einfassungsmauer, im Innern bearbeitete Blöcke, auch antike Grabsteine, aber nur Namen erhaltend wie ΣΦΟΔΡΙΑΣ etc. . . . Ich gebe es . . . nur als eine auf Pausanias ziemlich unklarem Berichte ruhende Vermuthung, dass dies Städtchen Kyrtones oder Korseia sey." Philippson locates the site properly on his map, *Zeitschr. d. Ges. f. Erdk. zu Berlin*, XXIX, 1894.

² This identification was accepted by Bursian, *Geogr. von Griechenland*, p. 212.

mentioned.¹ Small heaps of ancient squared stones are to be found, however, at a number of places on the plateau, and there can be no doubt of the existence of a fair sized village in antiquity. The location is as good for purposes of defense as that of Martino, and one can readily see where the walls must have been from the natural lines of the plateau along the edges of the valleys and ravines. This must be the site of *Bumeliteia*, as it is the only ancient town in the immediate vicinity of Larymna and in its economic district, being separated from other ancient towns by high, barren hills.²

As noted above, however, these ruins have been identified with Cyrtone (or Cyrtones). This cannot be right, however, for (1) Pausanias (IX, 24, 4) says that Cyrtone was only 20 stades from Hyettus. Now that we know where Hyettus was, *i.e.*, the Metochi of Dendra,³ it appears that it is more than 6 miles from Martino in an air line, and probably 7 or 8 by road, that is to say,

¹ I noted by the door of Hag. Georgios four small antique marble columns, eight to ten feet long, and inside a well preserved late Corinthian marble capital. In the churchyard wall are two fragments of Corinthian capitals of fine white marble. The inscription on the statue base inside the church has long since been published. For the new inscriptions which I found in various chapels about Martino and in the town itself, see *A.J.A.* XIX, 1915, p. 322. Dittenberger (in *I.G.* VII, 2899, 2842, 2841, 2844, and 4165-71) lists the Martino inscriptions under Hyettus in Boeotia. This is unquestionably wrong. Martino belongs topographically and historically to the Larymna valley, and must have shared the same political associations with Larymna at all times. There is besides no suggestion of Boeotian character in dialect or subject matter in any of the inscriptions, which resemble greatly in style those of Larymna. In fact it is probable that some of them were actually transported from Larymna during the long period when that region was administered from this site in the interior.

² For a view of the site see Figure 8. This is taken from northeast of Martino, about three fourths of a mile. Martino lies just to the right. The church of Hagios Georgios is above and to the left, that of Hagia Panagia below and to the left. Only a few feet away from the Panagia is the village well. The other building in the picture is a new mill.

³ Although the proper site of Hyettus has been known now for nearly 40 years it has hardly ever been placed properly on the maps, neither by H. Kiepert, *F.O.A.* XV, and R. Kiepert, XIV, Curtius-Kaupert (*Sitzb. Berl. Akad.* 1892, p. 1182), Philippson (*Zeitschr. d. Ges. f. Erdk. zu Berlin*, XXIX, 1894, Tafel I), Ed. Meyer (*Theopomps Hellenika*), not even by Frazer (vol. V, map facing p. 110) following Curtius-Kaupert, although in his commentary he is correctly informed, as indeed is R. Kiepert (cf. p. 2 of the accompanying description). The only reliable detail map of the region is by Bölte (*Pauly-Wiss.* IX, col. 91-2, after the French chart, with proper entries). Girard, *op. cit.*, map, was the first, I believe, to give Hyettus its proper location.

at least 65 to 75 stades instead of 20.¹ (2) Cyrtone was built ἐπὶ ὄρους ὑψηλοῦ, while the village at Martino is on a hill which Röss estimated as not over 60 feet in height. Nor is it even on a spur or foothill of anything that can be called a mountain.² (3) The highest part of the mountain upon which Cyrtone was situated lay between Cyrtone and Corsea ἐκ δὲ Κυρτώνων ὑπερβαλόντι τὸ ὄρος πόλισμά ἐστι Κορσεία. Now, no matter where Corsea be located in East Locris there is no "lofty mountain" the summit of which must be passed by anyone leaving the village beside Martino. As for the spring which M. Koutorga claims to have found in 1860, it seems to have disappeared or declined in importance, for I saw nothing of it, and our *agogiat* said the people had to use wells and cisterns exclusively. Certainly the big well at the foot of the hill was in almost constant use for purposes of drinking and washing during the hours of our stay. A minor secondary source of supply is a small spring about a mile north of the town on the way to Malesina, but it is neither on a mountain, nor does it pour out of a rock, nor is its water especially cool, though there are a few trees near by. Whether or not this was the spring meant by M. Koutorga I do not know, but if so his description is astonishingly inaccurate.³

¹ There is, to be sure, something very much the matter with the distances which Pausanias gives in this chapter. For example, he puts Hyettus only 19 stades from Copae, by way of Olmones, whereas in fact it is more than 5 miles in an airline! The distances given by Pausanias will have to be abandoned anyway, but at all events they cannot be used, as Girard actually does (*op. cit.*, p. 37, claiming that the Metochi Dendra is about 20 stades from Martino!), as evidence for identification. Koutorga (*op. cit.*, p. 395) tries to make it out that the way from Martino to Topolia is only a little more than two hours' walk and so fits well with the 39 stades mentioned by Pausanias. But Martino is more than 6 miles in an airline from Topolia, and considerably more by road, so that the 39 stades of Pausanias, *ca.* 4 1-2 miles, do not fit very well even if that were what he meant. As a matter of fact he says nothing about the direct route from Copae to Cyrtone, but only that Olmones is 12 stades from Copae, Hyettus 7 from Olmones, and Cyrtone 20 from Hyettus, a very different thing indeed.

² Despite Girard (*op. cit.*) who says this "tumulus" meets the description. I am certain the highest point of this hill cannot be 100 feet above the lowest level of the valley some considerable distance away. It is markedly lower than the hill of Martino itself.

³ See Figure 9. Even before the earthquake of 1894 the well below the village was the sole source of water supply (Skuphos, *op. cit.* [p. 46, n. 1], pp. 415, 445), while from its depth and the configuration of the district it seems extremely improbable that there has ever been a spring here, at least in modern times.

Somewhat the same objections apply to an identification with Corsea. There is no "lofty mountain" to cross over in order to reach this spot, and it is impossible to pass from this place directly to the plain of the Platanus, for that is undoubtedly the Rheveniko west of Proskyna, which is separated from Martino by several miles of low barren hills.¹

As, therefore, no other identification of the site near Martino can stand, we may unhesitatingly ascribe to it the name Bumeliteia.



FIGURE 9.—THE SOLITARY SPRING

CYRTONE AND CORSEA

We have seen above (under "Bumeliteia") that the site near Martino cannot be identified with either of these two names. Others have been proposed, however. Lolling² places Cyrtone at Monachou³ and Corsea at Cheliadou. These points are on

¹ On these places, Cyrtone and Corsea, see the next subdivision.

² *Baedeker*⁴ (Engl. tr.), p. 187; *Müller's Handbuch*, III, p. 128. The older localization, at what has since proved to be the site of Hyettus, was apparently due to Forchhammer, *Hellenika*, p. 179.

³ Monachou lies $1\frac{1}{2}$ hours ($1\frac{1}{4}$ return—fast walking) slightly south of west from Martino, a little over five miles as measured by my pedometer, when

almost a straight line from Topolia (Copae) to Halae, and if one supposes that Pausanias actually made just that trip, they have so much in their favor. But the distances given by Pausanias are absurdly wrong; Copae to Olmones, 12 stades, in reality *ca.* 50 by air line; Olmones to Hyettus 7 stades, in reality *ca.* 22 by air line; and now if Cyrtone be set at Monachou, the distance is 36 stades by air line as against 20 by road according to Pausanias. And again Monachou is about $3\frac{1}{2}$ miles, or *ca.* 33 stades, from Copae by air line, a distance which agrees with no other. Such discrepancies make it impossible to accept any of the numbers which Pausanias gives in this connection. It also raises the question of good faith, at least of personal observation. Heberdey (*Reisen des Pausanias*, pp. 102, 107), indeed, thinks that the Periegete went to Locris by way of Hyettus, and returned to Orchomenus by way of Opus and Hyampolis. This, it may be observed, is only a theory, devised to make explicable some scattered, apparently first-hand data, and the journeys of Pausanias are far too uncertain to justify pinning faith to any conjectural restoration of them. There are, further, two very weighty

I visited the place July 9, 1914, and about three and one half miles (air line) slightly east of due north from Copae, which is distinctly visible from the town site. On Bölte's map (*Pauly-Wiss.* IX, col. 91-2) it would be on the southern slope of the hill between the two branches of the small torrent northeast of Topolias.

The following description of the site I abbreviate from my note book. The place is called Palaiochori. A gorge running north and south with a good spring in the bottom lies to the east of the hill on which are the ruins. Another torrent from the northwest meets this stream a short distance south. Passing south along the east side of the hill one finds a small ruined chapel, and near by a small marble column and broken pottery, with a statue base of bluish marble and a stele base of red limestone. Two minutes further southwest is a larger ruined chapel, containing many hewn stones and pieces of pottery in the walls. Two small broken columns of green-streaked marble stand inside the chapel. About 30 yards to the northeast is a broken limestone drum of a large column about 0.96 m. in diameter. In the portico of the chapel stand two small columns with a swelling band at the top. The material is a coarse-grained marble. Near by are fragments of another of somewhat the same material. About 100 yards northwest of the chapel is a large limestone fountain basin, about 1.10 m. in diameter, the bowl about 0.3 m. deep, with a hole cut in one side for the water to flow out. Traces of the town wall can be seen on the east, south, and northwest sides. The summit of the hill has apparently been levelled off, and many squared blocks lie around. There are some traces of fortifications here also. Figure 10 is taken from the summit looking down over the lower chapel and up the ravine to the west. The characteristic form of Mount Chlomos is seen in the distance.

objections: (1) Pausanias nowhere shows the slightest first-hand acquaintance with things Locrian, and nowhere treats them systematically, although he indicates at one point (IX, 23, 7) that he had intended to do so. (2) Heberdey must assume that Pausanias swung around by Opus and visited Hyampolis and Abae on his way to Orchomenus. But it is as certain as anything can be in Pausanias, that he went from Orchomenus *towards* Opus, turning a little to the left in so doing, and reaching first Abae and then Hyampolis (X 35, 1 and 5).¹ All that is certain is that Pausanias started out once to describe a route leading north from Copae to Halae, and once a route leading from



FIGURE 10.—VIEW FROM THE SUMMIT OF MONACHOU (PALAIOCHORI),
LOOKING WEST

Orchomenus to Opus, but that in both cases he stopped before he reached the end. It is almost certain that these two side trips were not continuous. Now personal observation is expressly asserted² for Olmones, but not at all necessarily implied for

¹ See also Robert, *Pausanias als Schriftsteller*, pp. 256 ff., who points out how Orchomenus is a "Hauptzentrum," and locations are described upon roads radiating from it, not vice versa.

² Kalkmann may have gone too far in scepticism occasionally, but I feel that his attitude is in the main justified. Constant suspicion will alone avoid difficulties. Where Pausanias claims flatly that he actually was, it is possible that he may have been; where he does not do so, it seems nearly

Hyettus, Cyrtone, or Corsea, and even Heberdey (p. 102) makes no claim that Halae was visited. The remark about the character of the trees in sacred groves at Cyrtone and Corsea which Heberdey (p. 102 f.) and Hitzig-Blümner (*ad loc.*) emphasize, proves nothing, as Pausanias was always interested in ἄλσκη and in the kinds of trees therein,¹ and could have secured his information perfectly well from some literary sources.

Again, in travelling from Copae to Halae (a point which he never reached anyhow), if Cyrtone be at Monachou, why should he have made the absurdly long detour by way of Hyettus, which would have led him around three-fourths of a circle and in a course of fifteen miles at least would have left him hardly more than four miles from his starting point? Further, there is no "lofty mountain" at Monachou, nothing but the commonest of low hills, nor does the road thence to Cheliadou pass over anything that can properly be designated a "mountain crest." The only spring now existing at Monachou is right beside a torrent bed and could scarcely be described as pouring forth from a rock in any way different from ordinary springs.

I venture, therefore, to suggest that Cyrtone lay not at Monachou, but at Kolaka,² and for the following reasons. (1) It is in the same general line with Olmones and Hyettus, that is, a line drawn from Copae to Kolaka would pass just between these two points. (2) It is not much more than 4 miles in an air line from Hyettus, as near to it as any other unidentified site except Monachou. (3) It does lie on a "high mountain," and, what is more, on the side towards Hyettus from the crest

certain that he never came near the place. Robert (*Pausanias als Schriftsteller*) is certainly right in explaining the characteristic features of his composition in the terms of literary technique. The extremely formal arrangement of routes leading out of Thebes, each bifurcating at the end (pp. 252 ff.), is certainly only a literary device. It is inconceivable that any man should have actually travelled in such wise.

¹ This is a marked feature of his narrative. See the long list in Hitzig and Blümner, III, 2, pp. 990 f., s.v. *Heilige Haine*.

² Leake (*op. cit.*, p. 184), with his customary sagacity, had seen that "Cyrtone lay in a northwestern direction from Copae, that the road to Corsea crossed Mount Khlomo not far to the eastward of the peak, and that, as this summit is the only mountain in this part of Boeotia meriting the description of an ὄρος ὑψηλόν, the city Cyrtone was very near it on the eastern side. Whether any ruins still exist to confirm this opinion, remains to be explored."—Curtius, *op. cit.*, Frazer, *op. cit.*, Philippson, *Zeitschr. d. Ges. f. Erdk. zu Berlin*, XXIX, 1894, map, placed Cyrtone at Dendra, which is certainly wrong: cf. "Bumeli-teia," p. 158 n. 3.

of it. It is on a spur of Chlomos (1081 m.), the only really high mountain within a great many miles of Hyettus, and one that from its peculiar location is a conspicuous feature of the landscape in Locris, Phocis, and northern Boeotia, and is itself at the very considerable elevation of 492 m., which is higher than that of any other considerable village nearer than Boudonitza or Arachova, distinctly mountain towns. (4) It has a remarkable spring of exceptionally cold water which pours out of the utmost tip of a large rock that projects in a very striking fashion from the side of the hill just below the town. The natives regard

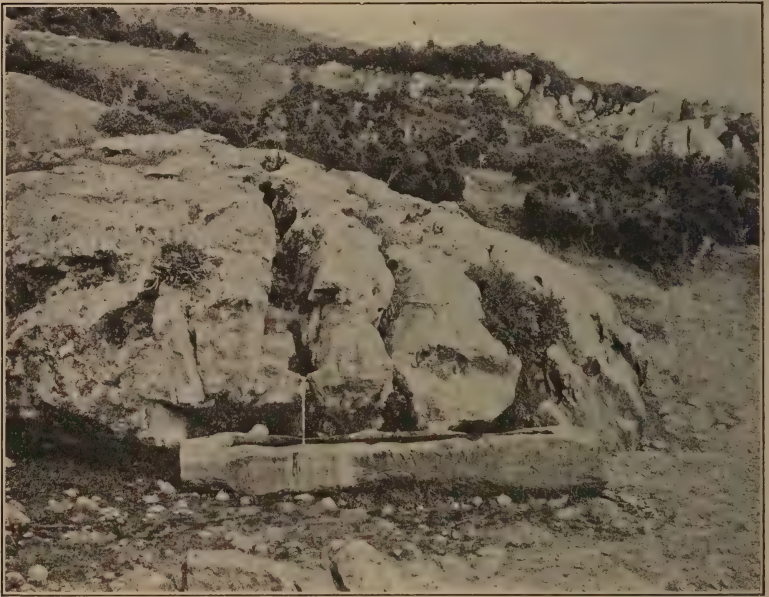


FIGURE 11.—KOLAKA. THE SPRING OF PAUSANIAS

it as a singular spring, and I was very much struck with its peculiar character, having never seen anything like it (see Figure 11).¹ (5) There are considerable ruins near by, some that look as though they might belong to a temple. In the short time I was there, however, I did not trace any city walls.

¹The rock is an eroded outcrop of the heavy masses of white limestone that are characteristic of this region. On the geological characteristics of this particular district see A. Bittner, *Denkschr. d. kaiserl. Akad. d. Wiss., Math.-Naturw. Cl.*, XL, Wien, 1880, pp. 6, 9.

An inscription has been found in the village, however, and is now in the church of Hagios Georgios (*I.G.* IX, 1, 287, cf. *A.J.A.* XIX, 1915, pp. 337 f.).¹ (6) In passing thence to Locris east of the Platanus river one would have to cross a mountain (the outstretching ridges of Chlomos), which lie somewhat higher than the town itself.²

As for Corsea,³ its location is pretty well settled by the two statements that it is on the other side of a mountain from Cyrtone, and only a slight distance above the Platanus.⁴ This will locate it without any doubt near Proskyna,⁵ either at

¹ In the wall of a new churchyard is also a fine marble slab, with columns in low relief on either side. The ancient inscription which occupied the centre was, however, chiselled out, when the wall was erected, and a clumsy face introduced with an inscription giving the date of erection, 1912.

² A. W. Gomme, in *Essays and Studies presented to Wm. Ridgway*, 1913, p. 123, mentions the possibility that the Γυρτώνα (acc.), from which according to Pherecydes (*F.H.G.* I, 102a) the Phlegyes harried Thebes and finally destroyed it, might be emended into Κυρτώνην, although he rejects it at once, proposes Γληχώρα, and finally suggests that Gyrtion may be Gla. It is no doubt wise, in such a thicket of possibilities, to refrain from making emendations. On the other hand, it is not impossible that some fancied resemblance between Gyrtion (which had also the variant Gyrtone) and Cyrtone (with the variant Cyrtones) may have done its part in spreading and confusing the myths regarding the Phlegyes. It is surprising that there is no mention of this Gyrtion in the immediate vicinity of Thebes (Pherecydes, *loc. cit.*, Θηβαῖοι δὲ, πλησιόχωροι ὄντες) in Stähelin's article Γυρτών in Pauly-Wissowa, VII, col. 2101 f.

³ Not to be confused, as has frequently been done, with the Boeotian Corsiae, as Forchhammer, *Hellenika*, p. 179, and Frazer, *op. cit.*, V, p. 133, f., point out.

⁴ The only stream of any considerable size in this region is the Rheveniko, which must be the Platanus. I was interested to learn that the region about the head springs of this stream is called *Platanaki*, and though this is not an uncommon appellation in Greece, it is very likely a genuine trace of the old name. Whatever the natives may have told Girard (*op. cit.*, p. 39) about the Platanus never going dry, it was certainly dry on July 11, 1914, when I crossed it. The fragments of pottery and limestone, and the grave discovered at the mouth of the Platanus probably represent a small harbor settlement for Corsea, as Girard, *loc. cit.*, suggests. I did not visit the spot.

⁵ The suggestion that it is at Malesina (Koutorga, *op. cit.*, p. 394; Bursian, *op. cit.*, p. 192, both calling the town "Mellenitsa") is quite indefensible. There are no ancient remains at Malesina that the natives know about (the so-called "Enetika" on the Austrian Map east of the town which I visited, is really "Venetika," and undoubtedly only a Venetian watch tower similar to that at Gardinitsa, as it commands an extensive prospect up and down the Euripus), and the few inscriptions that are preserved there (cf. *A.J.A.* XIX, 1915, pp. 322 ff.) have probably been brought from elsewhere.

the Palaiokastros,¹ on the hill just west of the town, or else at Cheliadou.² I see little upon which to choose between these two sites, as to a cursory examination they seem to have been of about the same age and size.³ They are situated so close to

¹ Before the church at Proskyna is a small ancient marble column, and a fragment of one has been built into the wall of the church. The Palaiokastros lies on a low, but steep hill, southeast of Proskyna. Girard (*op. cit.*, p. 38) calls it τὸ φρούριον, but the natives when I was there did not use that name. The wall on the east side, of rough polygonal masonry, can be traced for about 175 m. as Girard says; also for about 5 m. on the southeast corner and the northeast corner. On the side next to the village, however, as usually happens, I could find no remains of the wall. But this part is covered with a very dense growth of bushes which made observation difficult. An extremely copious spring pours fourth at the northern end of the hill. Though the site is much larger than Halae, it was not as well fortified, and, as hewn stones and pottery fragments are comparatively rare, I conjecture that it was an older settlement than the one at Cheliadou. Girard locates Corsea here (*loc. cit.*), but he did not visit Cheliadou, though the road which he took led him right past the site. Members of the American School opened a number of graves a few years ago in the region northwest of Palaiokastros up to Cheliadou, and found some remains of a small but solidly built ancient structure in a ravine between the two places, but they have not yet published an account of their excavations.

² Cheliadou lies a scant twenty minutes southeast of Palaiokastros, on a hill top commanding an extensive view. Some remains of city walls can be traced, notably on the east. Broken pottery is abundant. Some good foundations of hewn stones appear on the summit. One looks as though it ought to belong to a small temple wall. Just on the north edge there is a large round block of stone with a small hole in the centre, and about it four sockets filled with lead holding the ends of iron rods in them. Another similar stone is at the south corner, though the holes are empty, and a third, with only two holes, farther south. Their function appears problematical. At Hagios Georgios, 200 yards to the south, there are numerous fragments of pottery, nine small marble columns, one Ionic capital, two slabs of white marble with a conventional running design, and a large limestone fountain bowl. The ruins here, containing much more hewn stone, and showing more evidences of wealth and culture, probably belong to a later date than those at Palaiokastros. Both, however, are in the same valley, and must have used the same *ager*, so that both are doubtless to be identified with Corsea.

³ F. W. Forchhammer, *Hellenika*, p. 179, Leake, *op. cit.*, pp. 184 ff., 287 (cf. Dodwell, *Tour*, II, p. 57), apparently, and Girard (*op. cit.*, p. 38) certainly, place Corsea at Palaiokastros, but their evidence is poor, as Forchhammer and Girard did not visit Cheliadou, and Leake visited neither place. Körte, *Mitt. d. Athen. Inst.*, III, 1878, p., 313, Lolling (*Müller's Handb.*, III, p. 128) and Baedeker⁴ (Engl. tr.), p. 187, followed by Philippson, *Zeitschr. d. Ges. f. Erdk. zu Berl.*, XXIX, 1894, Map, and Skuphous, *op. cit.*, p. 445, place it at Cheliadou. Ross's tentative localization near Martino has been treated above. It should, perhaps, be noted that Forchhammer in the map accom-

one another that one is tempted to think they may have been but earlier and later settlements of the same community, just as most of the inhabitants of Proskyna moved to the new village of Trygana, which is situated a short distance to the west, after the earthquake of 1894.

And now to conclude with Pausanias: It seems probable that he stopped at Hyettus, and merely reported what information he had of the region north and east. There is nothing in the account of Cyrtone and Corsea that presupposes personal observation. He may indeed have gone to Cyrtone, and then reported on what lay northeast of that point. Opus, of course, lay not far from Kolaka-Cyrtone to the north, but he intended to reserve that for a special treatment. Here he gives a summary of the region between Larymna, which he had mentioned in the preceding chapter, and Opus, which he intended to discuss later. That no great highway runs between Kolaka Cyrtone and Proskyna-Corsea, makes no difference for his purposes: *ὑπερβαλόντι* means no more than "if one cross," and it is quite true that one would find Proskyna-Corsea on the other side of the mountain northeast of Kolaka-Cyrtone, if one actually crossed it in this direction.

Of course these little villages have no history properly so called. They are mentioned but once in antiquity, the passage quoted from Pausanias, and an examination of their probable sites but confirms the presumption of their inconsequence. Their political relations must have been determined by the fortunes of Larymna in whose sphere they lay, and to a less degree perhaps by Halae. Whatever state controlled these two parts of the Aëtolimni peninsula as a matter of course possessed these two hill villages. It may, indeed, be doubted whether Cyrtone was always Locrian. If it was actually located at Kolaka, it would lie indeed just across the divide between the bay of Opus and the Copaic Lake. Yet the divide at this point is singularly level, so much so that it was covered by large fields of wheat in 1914, and the farming as well as the pasture land of the village of Kolaka covers not merely the crest of the ridge here but extends distinctly over to the Locrian side. Indeed, the location of the village is determined solely by the existence of two panying his *Hellenika* set Corsea at the spot where Gell (*Itinerary of Greece*, London, 1819) had noted ruins (*i.e.*, Cheliadou) although he was unable to find them himself, and was inclined to believe that Corsea was close by Proskyna.

springs a little beyond the actual divide. Under these circumstances, and in view of the fact that the Locrians were at one time more widely spread in this general region than during the late period in which Pausanias is writing, I deem it probable that Cyrtone was Locrian in its earlier history, at all events.

MOUNT CHLOMOS AND THE "LOCRIAN ROSE"

Mount Chlomos we have had occasion to mention in the previous section. It is the only real mountain in this section of the country, being 1081 m. in height, it has a very characteristic sharp point,¹ differing thus markedly from the great majority of mountains in Greece, and is a most conspicuous feature of the landscape of all northern Boeotia, Phocis, and more than half of East Locris. It is thus the more surprising that its ancient name is unknown. Leake keenly felt the difficulty,² and after a judicious discussion of the evidence concludes quite properly that this was not Mt. Cnemis (certainly nothing about the shape of Chlomos could well have suggested a "greave"), and is inclined to call it Mount Cyrtone, as though the mountain bore the same name as the town (see the preceding section). There is nothing, however, in the text of Pausanias (IX, 24, 4 f.) to suggest an identity of name: it is merely ὄρους ὑψηλοῦ and τὸ ὄρος. H. Kiepert (*F.O.A.* XV) tentatively suggested that it might be Mount Delos. This is known only from Plutarch, *Pelop.*, 16 (speaking of Tegyra): Καὶ τὸ μὲν πλησίον ὄρος Δῆλος καλεῖται, καὶ πρὸς αὐτὸ καταλήγουσιν αἱ τοῦ Μέλανος διαχύσεις. The mountain is to be located by two things: (1) It is near the temple of Apollo which was at Tegyra; (2) it was near the point at which the Melas disappears. As regards the first, now that Bulle has located the temple of Apollo upon the Magoula just west of Pyrgo, we have that point fixed.³ Similarly Philippson has pointed out that the Melas entered the katavothra at

¹ This characteristic shape it owes no doubt in part to the fact that the "plis de l'Oeta" at this point bends sharply to the east. See Ph. Negris, *Plissements et dislocations de l'écorce terrestre en Grèce*, Athens, 1901, p. 40. See figures 10 and 12. On the peculiar shape and the geological formation compare also Philippson, *Zeitschr. d. Ges. f. Erdkunde zu Berlin*, XX, 1890, p. 388; XXIX, 1894, pp. 8, 26, and especially A. Bittner, *op. cit.*, pp. 6 ff.

² *Op. cit.*, pp. 180 ff.

³ See N. Bulle, "Orchomenos," *Abh. d. Bayr. Akad.*, XXIV, 1909, pp. 122 ff.

Strovi¹. These two points are in an air line nearly five miles apart, so that Plutarch is quite clearly speaking of the region in pretty sweeping, general terms. That being so, the only real mountain (*ὄρος*) in the vicinity is Chlomos, as the two Mavro Vounos, one between Aspledon and Abae, the other between Copae and Tegyra, are inconsiderable hills. R. Kiepert (*F.O.A.* XIV, text, p. 2) identifies Delos with the Mavro Vouno between Copae and Tegyra.² This hill, however, seems quite too in-



FIGURE 12.—MOUNT CHLOMOS, FROM THE EAST

¹ A. Philippson, *Zeitschr. d. Ges. f. Erdkunde zu Berlin*, XXIX, 1894, pp. 46 f. Forchhammer, *Hellenika*, p. 176, certainly is wrong in inferring from the words *πρὸς αὐτὸ καταλήγουσιν αἱ τοῦ Μέλαντος διαχύσεις*, that Mount Delos marked "die Grenze der Ueberschwemmung des Melas." The statement seems rather to mean that "the outpourings of the Melas cease at this point," i.e., that the river as such disappears in the general swamps. This may not, as a fact, be true of the Melas (cf. Frazer, *op. cit.*, p. 193), but it is what Plutarch actually believed; see his *Sulla*, 20. In that case this point is much more indefinite than the location of a katavothra into which the river was supposed to flow. As Bulle, Philippson, and R. Kiepert, however, seem to understand that a katavothra is meant, I have followed that line of the argument in the text, principally because it is not quite so favorable to my contention as the view just given, which I regard as the more probable, and I do not wish to overstate my case.

² R. Kiepert seems to be acting independently in this, but Curtius-Kaupert, in the map drawn after Lallier (*B.C.H.* XVI, 1892, pl. XII) and mentioned

significant to be called an *ōpos* when real mountains in the vicinity are nameless. Forchhammer (*Hellenika*, p. 176) located Delos above one of the springs of the Melas between Orchomenus and Aspledon. As Tegyra is now known not to have been there, nothing more need be said of this attempt. Someone (Forchhammer, *op. cit.*, p. 177, is indefinite and I have not noted this elsewhere) had identified Delos with the hill upon which Pyrgos stands, but aside from other objections, notably its insignificant size, Plutarch says merely that Mount Delos was near the temple of Apollo, not that the temple was built upon it (*καὶ τὸ μὲν πλησίον ὄρος Δῆλος καλεῖται*). This objection also completely disposes of Bulle's identification of Delos with the Magoula just west of Pyrgos (*loc. cit.*), a low rocky hill about 300 m. \times 160 m. \times 25 m. (height!).¹ It seems that there is nothing to do but to revert to the idea of H. Kiepert and accept Delos as the ancient name of Chlomos. If *Δῆλος* be a genuine Greek word, no more appropriate term for precisely this astonishingly conspicuous mountain (considering its moderate height) could be given. It is true that Delos, the island, because of the Doric *Δᾶλος*, has generally, and no doubt rightly, been denied a Greek etymology (e.g. Fick, *Vorgr. Ortsnamen*, pp. 58 f., 120), but there is no certainty that mountain and island have etymologically the same name.

In this connection it is interesting to consider what relation Mount Delos had to the curious tradition of the birth of Apollo and Artemis near Tegyra. Gruppe² is undoubtedly right in above (p. 158 note 3), had already placed Delos at that point. Philippson, *Zeitschr. d. Ges. f. Erdkunde zu Berlin*, XXIX, 1894, map, and Frazer, *op. cit.*, do the same.

¹ To call a low rock less than 90 feet high an *ōpos* seems quite impossible. The difficulty about the distance from the katavothra at Stroviki, Bulle rather lamely tries to explain away by remarking that the draining of the lake has changed conditions. But it has not changed the location of the katavothras surely. It is better to consider the term *πλησίον* as used broadly, for only in that way can one get a respectable mountain at all. Finally, had the Magoula been called Delos, its peculiar nature, originally a real island, no doubt, before any drainage of the lake had been attempted, no one would have thought of calling it anything but an "island" (its condition in historical times being an excellent explanation of the tradition regarding its final fixation), certainly never a "mountain." My view of the exact meaning of Plutarch would fit Bulle's argument admirably, for the Melas probably did enter swamps near here, but the other objections urged against it are conclusive.

² *Griech. Myth. u. Religionsgesch.*, p. 1257, 2. Elements of the Delphic myth also are interwoven.

regarding this as an adaptation (with modifications) of the Delian tradition, and not an original variation. If so, one naturally inquires, what might have led to the localization of the legend here, which necessitated the peculiar forms that the myth took. The cult of Apollo there in some form was doubtless ancient enough (Gruppe, *op. cit.*, p. 74, 13), but how could one have come to the idea of interpolating specific Delian elements? Certainly not from the original local names of the springs, for Φοῖνιξ and Ἐλαία are simply absurd as fountain names, while the palm does not grow in Boeotia. The proximity of Mount Ptoon, with the grotesque etiological etymology which the tradition assigns, would have been altogether too far-fetched. I venture to suggest that the original name of a mountain as "Delos" in the vicinity must have been the "efficient cause." Given an Apollo and a Delos, no matter if a mountain, and not an island, the rest might, with some ingenuity, follow. The existence, too, of genuine νῆσοι πλοάδες (*Theophr.*, *hist.*, *pl.* IV, 12, 4; *Pliny*, XVI, 168) in the swamps near by doubtless served to render the localization yet more plausible.

However, Chlomos may or may not have been Delos; its name, at all events, sheds some light upon an old literary allusion. In modern Greek χλωμός = "pale, fallow," and as Ulrichs (*op. cit.*, I, p. 193, and note) observed, this mountain receives its appellation because the herbs and bushes wither rapidly in summer, when the mountain, though well covered with undergrowth, has a singularly pallid look, as I also can bear witness, having been in sight of it a good deal of the time from July 11 to 16.¹ Now

¹ The pale color is noticeable in Figure 12. Much can be said for Ulrichs' suggestion that in the Homeric Hymn to Apollo, v. 223, where we have βῆς ἀν' ὄρος ξάθειον χλωρόν, we should read Χλωρόν, and refer it to the modern Χλωμός (modern Greek having the doublet χλωμός in the restricted sense of "pale," beside χλωρός "green," while the old Greek used χλωρός for both ideas; see Du Cange, *s.v.* χλωρός. Of course χλωμός is not derived directly from χλωρός, but from χλόη, χλοανός > χλωμός. See Foy, *Lautsystem der griech. Vulgärsprache*, Leipzig 1879, p. 44). The omission of the proper name of the mountain is most extraordinary here, and two such eminent critics as G. Hermann and Wilamowitz (*Isyllos von Epidauros*, p. 111) have refused to admit that the text as it now stands can be correct. To be sure, Messapius might more naturally be expected, as being nearer the Lelantian plain, and very close to the Euripus, but if Chlomos was actually meant, the selection of that mountain, at whose foot lay Tegyra, with the old Apollo cult, would have occasioned no surprise, as it is no great distance away from the Euripus, and the step from the Lelantian plain is no longer than that from

the "Locrian rose," as a peculiarly shortlived variety of that proverbially frail flower, was a favorite comparison with erotic writers to illustrate the rapid fading of beauty (see Lycophron, *Alexandra*, 1429, scholia and paraphrasis; Pollux, 5, 102; Eumathius, 9, 15; Const. Manasses, 4, 76 and 8, 9). A spur of Chlomos, the high hill above Atalante, is now called "Rhodon," and I was told by the waiter in a *xenodocheion* (an illiterate fellow who could not possibly have heard of the literary reference) that roses are very abundant upon the mountain in May, but that they last only a few days.¹

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Iolcus to Cenaeum, and much shorter than that from Cenaeum to the Lelantian plain itself. The step back to Mycalessus would be somewhat strange, but it is quite certain that the author of this hymn really did not know the location of the sites he mentions as exactly as one can now trace them on a map. Great allowances must be made for poetical geography.

¹ The use of this figure, especially by Eumathius (9, 15), suggests strongly that its origin was in some maiden's lament over lost beauty, doubtless in some one of the notorious Λοκρικὰ ῥοματα. A suggestion of what such a song may have been like we can get from the fragment in Athenaeus (697 B), with which may now be compared the singular Alexandrian erotic fragment published by Grenfell (Oxford 1896; cf. Crusius, *Philol.*, LV, 1896, pp. 355 ff., and *Herondas*⁵, pp. 124 ff.). But a discussion of these matters must be reserved for another connection.

LATIN INSCRIPTIONS AT THE UNIVERSITY OF
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IN *Old Penn*, XIII (April, 1915), pp. 873 ff., I published nineteen inscriptions belonging to the collection of the Latin Department of the University of Pennsylvania; see *A.J.A.* XIX, p. 481. Among them was the one shown in the accompanying illustration, which I thought contained the abbreviation Ga. (or possibly Ca.) for Gaia, although I remarked that such an abbreviation is unknown except in a few Faliscan inscriptions (see Deecke, *Die*

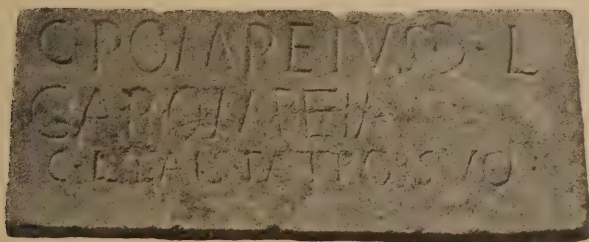


FIGURE 1.—INSCRIPTION IN PHILADELPHIA

Falisker, Nos. 8.1, 8.2, 43.b.2), while a freedman without a cognomen is also very rare.

Professor Dessau has suggested that Ga is a cognomen and he is unquestionably right, since with that correction the wording of the inscription becomes perfectly normal: Gaius Pompeius Ga, the freedman of a woman. Pompeia Lais, freedwoman of Gaius (Pompeius, dedicated this) to her patron. The cognomen Ga, Gaa, or Gaha is found no less than seven times in the sixth volume of the *C.I.L.*, as Professor Dessau has informed me, and it occurs eight times in the tenth volume, once in the dative form Gae (X. 5473). It is also duly listed in the Forcellini-DeVit *Onomasticon*. Nevertheless the inscriptions in which it occurs, although numerous, are of little prominence and comparatively slight interest, and I had never met the name in the course of a somewhat extended reading.

Ga is certainly not a well known name. This, however, would offer little excuse for the error, which receives more justification from the very extraordinary arrangement of the inscription upon the stone. Professor Dessau suggests that the stonecutter forgot the cognomen and then (not having left room for it) added it at the beginning of the second line. If this were so, one would expect him to have separated Ga from the following Pompeia by at least a little space, especially since his peculiar arrangement of the name Pompeia Lais left him an abundance of room for that purpose. It seems more probable that he, too, mistook Ga for an abbreviation of the name Gaia, perhaps influenced by the parallelism of the preceding C. Pompeius. His arrangement of the rest of the inscription is still less explicable and I venture to suggest no reason for it.

Two other inscriptions of the collection, besides those mentioned in the *A.J.A.*, perhaps deserve special notice: (1) *Plotius L.L. Acutus*, because the cognomen is incorrectly given as *Acuius* in *B. Com. Rom.* XXXIII (1905), p. 354, although the T is perfectly clear on the stone, as well as in a squeeze and a photograph; (2) *A. Tettius A. L. Malchio Teti A. L. Salvia*, because of the unusual order of the name of Aulus Tet(t)ius in the second part of the inscription; see Dessau, *B. Com. Rom.* 1913, p. 4 ff. and Oxé, *Rh. Mus.* 1904, p. 108.

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BABYLONIAN ORIGIN OF HERMES THE SNAKE-
GOD, AND OF THE CADUCEUS

I.

THE study I have for some time been making of Medusa,¹ which has shown her to have originally been an important figure in pre-Olympian Hellenic cosmogony and cult, a figure which was afterward absorbed in a subordinate rôle by the Olympian system, has led me, I believe, to solve also the problem of the origin and real character of Hermes and his *Kerykeion*.

Hermes was, like Medusa, a pre-Olympian. He also was admitted on sufferance into the new Olympian pantheon, curtailed of his real functions, and made to do service of less importance than when, as a subsidiary Chthonic god, he formed part of the organized cosmogony of the primitive matriarchal system.²

I expect to show that the prototype of Hermes was an Oriental deity of Babylonian extraction; whose character was that of a god of spring; whose function it was to preside over fertilization; whose position was not that of a primal deity, but that of agent and messenger of the Great Mother, in whose domain he brought life to light in the springtime of each year, and so became also associated with the spring sun.

This proto-Hermes was always a snake-god, and before the era of complete anthropomorphism he was thought of in snake form. But it is an essential element of his function that he was not a single snake—for the great single Earth Snake was the Mother Goddess—but the double snake, male and female, the most prolific form of copulation in the animal kingdom.

For this reason the emblem of the god was the *Kerykeion* or caduceus, a pair of snakes wound around a wand or sceptre. But before it became the god's emblem, the caduceus had been,

¹ A.J.A. XV, 1911, pp. 349 ff.; XIX, 1915, pp. 13 ff.

² I read a preliminary paper, in which I outlined my conclusion, before the American Philological Association and the Archaeological Institute at their annual meeting at Haverford, in December 1914.

in the pre-anthropomorphic era, the god himself; and continued to be so regarded long after the prevalence of anthropomorphism.¹ The Caduceus-god was, therefore, the predecessor of the Priapic herm-god. The two-sex snakes conveyed the same idea as the phallus. The phallic god appears to have been unknown to the early Oriental form of the cult and to have been introduced by those who mediated the Hermes cult to Greece.²

The subject must, then, be approached by way of its fundamental element, the *Kerykeion*; but, first of all it will clear the ground to epitomize the past and present attitude of scholarship toward both Hermes and the *Kerykeion*.

It is an interesting step in the right direction that the phallic and nature character of the primitive Hermes is by way of being more clearly recognized and that some value is given to the traces of his pre-Olympian origin in the literature of the late Roman period, which revived in philosophical form so many persistent primitive popular traditions. A typical judgment of this sort is that of Farnell³ in his elaborate study of the cult of Hermes. Farnell feels that while Hermes "appears to us as a Hellene of the Hellenes" he yet "may be a surviving figure of a pre-Hellenic religion." He favors the Pelasgic derivation of the Arcadian Hermes cult, which is the aboriginal source for Hellas, and in which the phallic nature is pronounced, with Pan as the son of Hermes. The attractive resemblance between Maia, the mother of Hermes, and Mâ, the Mother Goddess of Cappadocia and Bithynia, suggests the Anatolian derivation of Hermes. But, while Farnell favors an original non-Hellenic and phallic Hermes, he fails to correlate him correctly with the *Kerykeion*, for he believes it to be of purely Hellenic origin and character, without connection with the nature-Hermes, a simple implement evolved out of a shepherd's crook adopted by heralds as their staff.⁴

Modern German scholarship has not gone even as far as Farnell on the right road. Its most recent and authoritative verdict,

¹ Pre-anthropomorphism is hardly correct as a chronological statement; it is of course rather a matter of a state of mind than of a date.

² At the same time the phallic character was made evident by the ithyphallic figures supporting or flanking the caduceus on Babylonian cylinders, e.g., Ward, fig. 481, from a cylinder in the British Museum.

³ *The Cults of the Greek States*, Vol. V (Oxford, 1909), pp. 1 ff.

⁴ *Ibid.*, p. 20, where he remarks that there is no need to derive this simple implement, as some have done, from Phoenicia, or, as Sir William Ramsay derives it, from Phrygia.

that of Stein in the Pauly-Wissowa *Reallexicon*, is conservative, treating Hermes as a purely Hellenic creation, though granting that his original character was that of a god of fruitfulness in nature, in its three forms—human, animal and vegetable. He agrees with Farnell in regarding the male organ of generation as the primitive emblem of Hermes, and the *Kerykeion* as merely the herald's staff: "der Heroldstab in engerem Sinne."¹

The conventional view of the *Kerykeion* has been held, practically without change, ever since the time of K. O. Müller, and may be considered as expressed with the greatest detail and authority in Roscher.² The caduceus wand is held to be the shepherd's crook decorated in the course of time with the snakes and with ribbons. If this were so it would be a late adjunct to the paraphernalia of Hermes and quite unconnected with his early phallic and nature cult. Also, in this interpretation of Roscher, the divinatory, magical, lifegiving powers of the wand, so clearly to be traced in Greek literature and art, are made quite secondary

¹ Stein says in the beginning (p. 774): "Am tiefsten scheint seine Bedeutung als Gott der Fruchtbarkeit zu liegen. Im elischen Kyllene u. vielleicht auch auf dem arkadischen Gebirge gleichen Namens wurde er als Phallos dargestellt (Paus. VI, 26,5; Artemidor, I, 45; Lucian, *Supp. tr.* 42 u. ö)." The treatment of the caduceus in the part of the P. W. article devoted to the archaeological material is, however, extremely interesting and suggestive and will be quoted in a note to p. 178.

² Müller, in *Arch. der Kunst*, p. 504, stated that the caduceus was originally the olive-branch with the *στέμματα* which were afterwards developed into serpents. The article in Roscher (p. 2365) is by Scherer, who says: "Als Symbol seiner Heroldswürde führte H. das sogenannte *κηρύκειον*, das ursprünglich gewiss die einfache Gestalt eines Hirtenstabes oder eines *σκήπτρον* hatte, wie es die homerischen Herolde führen (*Il.* H. 277, Diod. 5, 75), später aber in mannigfacher Weise verziert wurde (Preller, *Philol.* 1, 512 f. = *Ausgew. Aufs.* 147 ff.). Da solche Stäbe in der Regel von Gold oder doch mit Gold verziert waren, so erhielt H. davon schon in sehr alter Zeit das Epitheton *χρυσόβραπις* (*Od.* ε 87 u. ö.). Hie und da legte man diesem Stabe auch mantische (*Schol. Il.* ο 256) oder magische Kraft bei, indem man glaubte, dass der Gott mit demselben einschläfere oder wecke (*Il.* Ω 343. *Od.* ε 47, ω 2), oder die Seelen der Verstorbenen hinter sich her in die Unterwelt hinabziehe (*Od.* ω 5 f.; Verg. *Aen.* 4, 243; Hor. *Car.* 1, 10, 18), oder endlich Verwandlungen bewirke (Antonin. Liber. 10, etc.). Auf den Mythos, dass H. diesen Stab vom Apollon erhalten habe (*Hy. in Merc.* 529; *Schol. Il.* Σ 256) ist nach meiner Ansicht nichts zu geben, da er ihm schon als Götterherold ursprünglich eignen musste. [Ueber das *κηρύκειον* vgl. Böttiger, 'Über die vorgeblichen Schlangen am Mercuriusstabe,' *Amalthea* 1, p. 104-116; Preller, 'Der Hermesstab,' *Philologus* 1, p. 512-522; L. Müller, *Hermes-Stavens Oprindelse* (see *Arch. Anz.* 1866, p. 219-24).]"

to its heraldic function. In Figure 1, Hermes, represented as evoking souls, carries both kerykeion and rhabdos. The entire pro-



FIGURE 1.—HERMES, ON A JENA LECYTHUS (Harrison, *Themis*, p. 295)

cess of evolution of the wand is supposed to have taken place within the Hellenic sphere.

This frivolous and futile theory, that the snakes of the Kerykeion were merely decorative and quite devoid of meaning, has never been seriously questioned, I believe,¹ except by Miss Harrison, who has come closer than any writer to sensing the

¹ In this connection it will be interesting to quote from 'Hermes' in the Pauly Wissowa, under 'Hermes in der Kunst,' p. 764: "In der Hand trägt der Gott gewöhnlich d. für ihn charakteristischen Stab (ῥάβδος, κηρύκειον),

der entweder wie ein ganz einfacher Stab gezeichnet wird oder gewöhnlich an dem nicht gehaltenen Ende eine eigentümlich gespaltene und gewundene, verschiedentlich variierte Form aufweist, die von mächtig ausladenden hornartigen Spitzen allmählich das Aussehen einer 8-Zahl (mit dem oberen Zirkel geschlossen oder geöffnet, auch zweimal über sich selbst gestellt), annimmt—man fasse den Stab als Hirtenstab, Heroldstab oder (wahrscheinlicher) Zauberstab—oder endlich als eine Kombination dieser Elemente auf (den wahrscheinlich orientalischen Ursprung des Zwiesselstabes hat man aus phönikischem, hettitischem oder mesopotamischen Kulturkreise ableiten wollen, vgl. L. Müller, *Gesellsch. d. Wiss.*, Kopenhagen, 1864, 171 ff. u. O. A. Hoffmann, *Hermes und Kerykeion*, 1890), Münsterberg, *Arch. Epig. Mitth.* XV, 141 ff. Jedenfalls existiert die Möglichkeit, dass der Künstler dem Stabe je nach der verschiedenen Situation verschiedentliche Bedeutung unterlegte. Er kann auch dem H. in die eine Hand das Kerykeion, in die andere einen gewöhnlichen Stab geben. Zuweilen ist das K. mit heiligen Wollenbinden geschmückt (um so den Sinn der Zauberknuten des Stabendes hervorzuheben?), auf der Memnonschale (*Wien. Vorleg.* 1890–1, Taf. 10. Head *H. N.* 81). Auch eine stilisierte Blume sieht man in seltenen Fällen in der Hand des Gottes . . . und das K. endet auch in Blütenspitzen bei Furtwängler *Vasenkatal.* Berl. 494."

I have been unable to obtain a copy of a dissertation published in 1913 by R. Boetzkes, *Das Kerykeion* (Münster, 1913), to which my attention has been called by my friend W. Sherwood Fox.

real nature both of Hermes and his emblem. Her study of Hellenic snake worship in *Themis* must be referred to by anyone wishing to understand how fundamental and persistent an aspect this was of real Greek religion. Miss Harrison has divined that Hermes was a snake god in his original form, but she was unable to find the proof of it, or to see the duality of the snake form as essential. It goes without saying that she was not cognizant of the Oriental connections.

Miss Harrison, in *Themis*, p. 266, conjectures that the archaic cult-image of Hermes in the old temple of Athena Polias on the Acropolis was "like the Hermes of Kyllene, an *αἰδοῖον*, possibly snake-shaped." On p. 294 she regards Hermes as a humanized form of the snake life-daimon, the Agathos Daimon. On p. 295 she goes so far as to say: "He [Hermes], a snake to begin with and carrying always the snake-staff, is the very *daimon* of reincarnation." Again, on p. 297 we read: "Hermes, as Agathos Daimon, was once merely a *phallos*; that he was also once merely a snake, is, I think, a safe conjecture. But it is merely a conjecture: I can point to no actual monument where Hermes is figured as a snake." Of course this was inevitable, as Hermes was never a single snake: only a double two-sexed snake.

As first planned, the present paper was to have presented in the first place the Greco-Roman material; then the Etruscan; then the Hittite-Syrian and finally the Babylonian. The advantage of this plan was that it led to the Oriental origin by stages so gradual as to overcome the scepticism that seems to envelop many minds whenever the Oriental origin of anything Hellenic is asserted. I shall, however, adopt the simpler plan of beginning with the earliest representations in graphic art of the *Kerykeion* (which I shall henceforth call "caduceus") and the caduceus-god, and shall not introduce the Hermes question *per se* until it forces itself into the arena.

I. THE BABYLONIAN AND HITTITE CADUCEUS

It is to the acumen of Dr. William Hayes Ward¹ that we owe the discovery of the presence of the caduceus on Babylonian cylinders of the ancient empire and other cylinders of Western Asia.

¹ Ward (William Hayes), *The Seal cylinders of Western Asia*, Washington, 1910 (The Carnegie Institution). Nearly all my illustrations are taken from this work.

They place the origin of the emblem at least as early as the millennium between 3000 and 4000 B.C. His demonstration was decisive, even though he might have increased its value by drawing more detailed mythological conclusions. It was natural that he should not in such a work concern himself with its bearing on the origin of Hermes. Dr. Ward summarizes his evidence under the heading *The Caduceus*, in his list of emblems of deities to be found on the cylinders (p. 408): "This important emblem, called a candelabrum by Ménant, is not infrequent on Babylonian cylinders, especially of the Middle Empire. It does not appear in the Assyrian or Syro-Hittite figures. It consists of two serpents rising from a vertical stem, with imperfect bodies and heads thrown outward. The neck is thickened like that of the Egyptian asp. Between the two serpents is often a vase . . . but this is not always clear nor always present . . . The object . . . may be pointed, to be set up

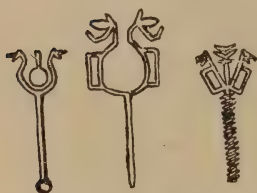


FIGURE 2.—WARD, p. 408

in the ground. Its serpentine character is discovered by comparing it with the single serpent as in Fig. 427 or in Fig. 31 [my Fig. 27], where the god carries the serpent as a rod over his shoulder. . . . This emblem is held in the hand of Ishtar . . . Doubtless this caduceus, which may be the source of

the Greek caduceus, was originally conceived of as a weapon."

In Figure 2 are the three types of caduceus on Babylonian cylinders selected by Dr. Ward to illustrate the above remarks. In Figure 27 is the single serpent used as a divine emblem held by a god over his shoulder; and in Figs. 6, 24, 26, 31, 32, 33, 36 held with the head down as an emblem which is probably the prototype of the *harpê*, for it practically was given the *harpê* form in Assyrian art (see Fig. 37).

In the following study I do not accept two of Dr. Ward's statements in the passage just quoted. The first is that the caduceus does not appear either in Assyrian or in Syro-Hittite cylinders. While this is true of Assyrian cylinders, where the Tree of Life seems to have replaced the caduceus, it does appear in a considerable number of the Syro-Hittite cylinders illustrated by Dr. Ward himself, and in the descriptive text he himself calls them caducei. So we do not really disagree. His statement was a mere inadvertance, which he would be the first to recognize.

The second point is his suggestion that the Babylonian caduceus was originally a weapon. This idea may be due to the emphasis placed by Dr. Ward on the warlike character of the goddess Ishtar. There is, however, complete agreement among scholars that Ishtar was primarily a nature goddess and that her warlike aspect was a later secondary evolution. Dr. Ward also sees a weapon in the bulbs which I shall try to prove fruits of the Tree of Life.

I shall include the other works beside cylinders on which the caduceus is found, such as the Gudea vase and the limestone reliefs.

The Caduceus and the God Ningishzida.—There are two main groups of cylinders and reliefs on which we find a caduceus. In one group it is an independent emblem; in the other group it is held by a god. In the first case it is of large size, usually as large as the human or divine figures of the same cylinder; in the second case it is usually quite small, like a sceptre or wand.

The former group must be studied first. It falls into two subdivisions: (1) that in which it is plainly an object of worship, being flanked or held by genii, or demi-gods; (2) that in which it stands alone, though associated with correlated figures or emblems.

The first illustration (Fig. 3) is the famous vase of green steatite found at Telloh (Lagash) and now in the Louvre.¹ It is a libation vase, dedicated, according to the archaic inscription that crosses its figures, to the god Ningishzida by Gudea, *patesi* or ruler of the city and state of Lagash. The chief deity of Lagash was Nin-girsu, a solar deity. This is made plain by



FIGURE 3.—GUDEA'S LIBATION VASE
(= Ward 368c)

¹ De Sarzec, *Découvertes en Chaldée* (Paris, 1883), pl. 44, Fig. 2, pp. 234–236; Heuzey, *Coll. d'antiquités chaldéennes* (Paris, 1902), pp. 280–284; Jastrow, *Aspects of Religious Belief in Babylonia and Assyria*, pl. 4.

numerous monuments and inscriptions. Ningishzida was a subordinate deity, the special patron of Gudea, whom he is represented in several works as presenting to the chief deity, Nin-girsu, very much as in works of Christian art an emperor, king, or bishop is being presented to Christ by Saint Peter. The dedicatory inscription in itself would tend to show that this patron of Gudea is portrayed on the vase. The subject is a mystic adoration scene. The centre is occupied by a large caduceus which stands upright and unsupported. It is formed of a wooden staff which we may imagine as pointed and stuck into the ground. The artist has carefully indicated the bark of the tree. The two snakes face each other with open mouths at the top of the staff. At its base their tails interlace. Their scales and heads are well marked. This is the god Ningishzida. He is being adored by two composite genii, standing at attention and holding each a long ritual lance-like or sword-like staff with a handle which they do not grasp, and which is exactly like one held by a figure like that of the hero Gilgamesh when in attendance on some deity.¹ The dissection of these hybrid genii would indicate that they are a composite of the different animals and birds currently used as divine symbols and attendants, both solar and chthonic: the scorpion, the serpent, the eagle and the lion, though the serpent dominates in head and body.² The dedicatory inscription to the god is interrupted by their bodies.

The objection to considering the caduceus to be the god himself instead of merely his emblem can be set aside for various reasons. The first is derived from the name of the god. *Nin-gish-zida* is translated as meaning "God of the Right hand Sceptre" or more exactly "Right-hand Sceptre God."³ This describes the caduceus-god perfectly. He is a subordinate or ancillary deity; an instrument in the service of a principal deity, taking the form of a sceptre held in this deity's right hand. We shall see later that the caduceus is held in the right hand either of the Mother Goddess (Ishtar) or, more rarely, of the Sun-god (Shamash).

It would be interesting to determine the date of this libation vase. If it is not possible as yet with exactness, it may be said that while in one book Dr. Jastrow dates its dedicator, King

¹ Ward, p. 378, figs. 648, 205, 289, 284; cf. 285, 286.

² The head and trunk are serpentine; the claws of the hind-feet, beside the wings, are the eagle's; the tail is the scorpion's; the fore-feet are the lion's.

³ In the Adapa legend it is abbreviated to Gishzida.

Gudea, *ca.* 2350 B.C., in another he places him a *thousand* years earlier in *ca.* 3300.¹ The consensus of opinion places Gudea between 3000 and 4000 B.C.

Before proceeding further, I must reproduce all Gudea's known representations of this caduceus-god Ningishzida and a few others related to them because they show that in his time, which we may roughly reckon as *ca.* 3500 B.C., this god's personality had already been evolved from a pre-anthropomorphic to an anthropomorphic form through a series of stages the study of which provides, I believe, the first instance of such an evolution proved by monuments. It is an evolution that has been supposed, that has been preached, but that has not thus far been proved by monuments. The fact that under Gudea both the earlier animal and the later human form were used is probably due to a conservatism that maintained the archaic and traditional pre-anthropomorphism by the side of the form that appealed to the more developed religious ideas.

The theme on the seal cylinder of King Gudea (Ward, Fig. 368a), as it can be studied in an impression on a tablet now in the Louvre, is very clear in the rôle it assigns to Ningishzida (Fig. 4). The supreme god—Nin-girsu, Ea or Shamash—is seated on a throne. From his shoulders flow two streams of water into vases standing on the ground. It is from him that the element of moisture in the earth is derived. In his right hand he is holding out a vase overflowing with two streams, and crowned by the triple flower emblem of fertility, to an approaching secondary deity, identifiable by the two snakes that project, one from behind each shoulder. This god is receiving the vase in his left hand while with his right he is leading and presenting to the principal god the King, Gudea. Behind Gudea is a goddess, the consort of the principal god, and behind her the winged and horned lion, a solar emblem. The introducing god is identified as Ningishzida not only by the snakes, but because Gudea in his



FIGURE 4—(= Ward 368a)

¹ Jastrow, *Aspects of Religious Belief*, p. 14, 426, for the date *ca.* 2350; and his *Die Religion Babyloniens und Assyriens*, I, 36 for the date *ca.* 3300.

inscriptions calls him "my god" and says that "he takes me by the hand and leads me into the presence of [name of god]."¹

The scene shows Ningishzida mediating to the Kingdom of Gudea the fertilizing waters that are the gift of Ea, or Shamash or whoever is the main deity. A similar scene is given on a fragmentary relief of Gudea in which the god is mostly missing, but Ningishzida, with his shoulders sprouting serpents, is leading the King (Fig. 5) whom he grasps by the hand. This single figure is given enlarged in Figure 7a. He is preceded by another introducing deity with a long pendant staff. This relief is on a limestone panel in the Berlin Museum,² which is mutilated on the right side. It is possible to make out a stream of water;



FIGURE 5.—LIMESTONE TABLET OF GUDEA (=Ward 368d)

part of the throne of the god; the head of a lion beside the throne, and a bearded attendant behind it. In one of Gudea's inscriptions,³ quoted by Dr. Ward, it is said of him that as he approached his supreme god Nin-girsu⁴ in his temple: "the god Lugal-Kurdub went before him, the god Gal-alim followed him; Ningishzida, his god, held him by the hand." There is no doubt, then, that the god with a serpent sprouting from each shoulder who grasps Gudea's hand in the tablet and on the seal is the god Ningishzida. Neither can it be

doubted that it is Ningishzida who is represented by the caduceus on Gudea's libation vase. Now Dr. Ward (pp. 128–

¹ Ward, *The Seal Cylinders*, p. 127–128, 215, 376, Heuzey, *Sceau de Goudéa*, in *Rev. d'Assyriologie*, v. 135; VI, 95. For the inscriptions of Gudea see also, De Sarzec, *Découvertes*; Thureau-Dangin, *Sumerisch-Akkadische Königsinschriften*; Jastrow, *Die Religion B. u. A. I.*, p. 79, 92, 93, 395; II, 955.

² King, *History of Sumer and Akkad*, Fig. 12, p. 47; Meyer (Ed.), *Sumerier u. Semiten in Babylonien*, pl. VII; Ward, Fig. 368d.

³ Ward, *op. cit.*, p. 128; Gudea's Cylinder A col. 28, 14–17 in De Sarzec, *Déc. Thureau-Dangin*, *op. cit.*, etc.

⁴ It seems probable that the principal god here is not Ea or Shamash, but Ningirsu, because in Gudea's hymn (Jastrow, *Die Religion etc.*, I, 395) to Ningirsu the god is said to be a mighty lion and to rule the deep, and in his dream (Jastrow II, 955) he sees two lions flanking the god's throne, just as in the relief.

130) has very cleverly seen the connection with two cylinders which he reproduces, without, however, pointing out that they represent two successive stages in the evolution 'from the serpent-pair to the man-snake-pair.

In the first cylinder, now in the J. P. Morgan library in New York (Ward, Fig. 368*b*), given in Figure 6, with the main figure enlarged in Figure 7*a*, we are presented with a Lazarus-like human figure, helplessly wound up in the coils of the two serpents and perhaps the most archaic form of the man-god, that which is the nearest anthropomorphic approach to the original plain snake-spirit. On the cylinder is a line of deities. On the extreme left is Ningishzida in the form of this stiff, slender image, front face, resting not on human feet but on the tails of two serpents whose



FIGURE 6.—(= Ward 368*b*)



FIGURE 7.—(a) and (b) = Ward p. 376

coils are wound tightly about the body in winding spirals, with heads that project from behind the shoulders on either side in exactly the same way as in the Ningishzida of Figures 4 and 5. The god has his arms close to his body with hands folded on his breast. It is like a primitive *xoanon*, with nothing to indicate the usual drapery or feet back of the serpent folds, only a cubiform sheath. The quasi-human figure simply takes the place of the wand of the vase of Gudea in the caduceus composition. The tail ends seem bent over to form a sort of tripod base; or else the base is an independent design to support the image. These are the two forms of the god as an object of worship. As a god in action, however, his limbs would have to be freed from the coils and only the serpent heads and necks would appear, growing from his shoulders. Though this *xoanon* figure is, so far as I am aware, unique, the idea must have been fairly common, for it is

reproduced in Hellenistic and Roman times in the Persian Mithraic iconography of the supreme god Zervane, the god of fire and heat, whose figure is encircled by a coiled serpent. Next to the god Ningishzida on the cylinder is a figure of the nude goddess of exactly corresponding character: hieratic, immobile, front-faced, with hands pressed to her breasts. She is the fruitful principle of the earth mother. Her name is uncertain. She is called Belit by Menant, Zarpanit by others.¹ In the cylinder (Fig. 35) on p. 202, she is placed beneath the caduceus, so that the juxtaposition is significant and intentional. She may be called the fecundity element in the all-mother Ishtar, as Ningishzida is the fecundating element in the spring sun. A fragmentary cuneiform text says of the goddess Belit-ili (?) that her breast is filled with milk and that the lower part of her body is that of a serpent.



FIGURE 8.—(= Ward 368b)

The same text speaks of the god Ea as having a serpent's head, and though this does not appear in any known monuments it is interesting as emphasizing the Babylonian connection between moisture and the serpent.²

The second cylinder (Ward, 368b), also in the Morgan collection, illustrates the succeeding stage (Fig. 8). Ningishzida stands facing the spectator in the same stiff attitude as of an image, not a living person. But the two serpents are uncoiled, the human body is made perfectly human by the addition of feet on which it is firmly planted, and the body from the waist down is expanded to normal width with a roughly flounced robe. The long snakes are held in each hand above the middle, hanging almost straight but so as to form the outline of the god below. They cross just above the waist so that their heads flank the

¹ Beyond "Belit" is the worshipper and further on a deity, who must be thought of as standing in front of Ningishzida.

² Ward, p. 131; Bezold in *Zeit. f. Assyriol.*, IX, p. 116. The cylinders which represent a deity that is human above the waist and is in the form of the coils of a single snake below the waist, like the Hellenic Cecrops, make this deity always male and bearded: Ward, Figs. 362, 363, 364, 365, 366, 367. The only unbearded example is Fig. 368. In Fig. 367 the god has Sun-rays on his shoulders.

god's face quite closely.¹ The transformation to an anthropomorphic god is here almost complete: complete except for two facts, that the god has not yet been fused with his life-source, the two snakes, and that, therefore, he cannot yet move and act. But this last step was taken in the creation of the type in Figures 4 and 5, where the god lives and moves in his human form.

It is important in this cylinder to study the other figures and emblems, because they will be found to belong entirely to the class of life-producers; and to give, for this reason, the strongest confirmation of my interpretation of the caduceus-god. We may, in the first place, eliminate the figure on the extreme left. He is merely the worshipper. Between him and Ningishzida is the orb of the sun inside the crescent moon, below them the seven circles of the Pleiades, and at the bottom the Egyptian ankh or symbol of life. On the other side of Ningishzida is a group which Dr. Ward has refrained from describing, though it is not only unique but of extraordinary value. It seems to represent the original *connubium* of the god and the goddess. The nude goddess (Zirpanit ?), standing as usual in front view, with drapery withdrawn indicated by a double base line and single side lines. Her left arm is extended to clasp the shoulder or neck of the god, who is advancing toward her with his right arm grasping her under the arm and his left hand extended to touch her drapery. Above them is the star representing either the Sun or the planet Ishtar. As a frame beyond is the Tree of Life surmounted by three animals like rabbits. This *connubium* of the male and female principles at the beginning of the evolution of the universe is described in the remarkable cosmological tablet recently deciphered by Dr. Langdon, which has also been studied by Dr.

¹ In the very archaic and crude cylinder, Ward 120, is a front-faced figure holding out a long erect serpent in each hand, away from his body, isometrically. In Ward 139*a*, they flank the nude figure of a god with a club, but stand erect without being held by him. The god is solar. In Figure 9—see the next note—the two serpents are held in one hand. In Figure 38 is a similar use of the two snakes. It would be beside the mark to comment on the various forms of the single serpent on the cylinders, as in Ward 923. I will merely say that perhaps the single serpent explains the two staffs held by the genii in the Gudea vase: see Menant in *Cat. de la Coll. De Clercq*, pl. XV, 131, where a "Gilgamesh" stands behind the Moon god holding a long stiff serpent with arched neck as a staff, while in other cylinders the staff he holds is exactly like those of the Gudea genii: see p. 182 and note.

Jastrow.¹ It is the original act of which one may say that the caduceus-god is the propagator throughout the universe in the various forms of life. I cannot lay too much emphasis on the interest of this scene. The presence of the *ankh* and the Tree of Life is additional evidence in favor of the interpretation I am giving not only of this scene but of the whole caduceus problem.²

The myth is referred to by Jastrow (*Aspects*, etc., p. 130) in explaining the evolution of the idea of the interaction of sun and earth. "A similar deity [*i. e.* to the goddess Ishtar], symbolizing the earth as the source of vegetation—a womb wherein seed is laid—must have been worshipped in other centres, where the sun-cult prevailed. . . . The consort of the old solar deity Ninib represents this great female principle. Their union finds a striking expression in a myth which represents the pair, Ninib and Gula (or Bau), celebrating a formal marriage ceremony on the New Year's day (coincident with the vernal equinox) receiving wedding presents, and



FIGURE 9.—(= Ward, 823)

ushered into the bridal chamber with all the formalities incident to the marriage rite.

. . . . When, therefore, the Psalmist describes the sun (xix, 5) as 'Coming like a bridegroom from his bridal chamber,' he is using a metaphor derived from the old myth of the marriage of the Sun with the Earth in the happy springtime of nature's awakening." A Phoenician version of the divine marriage will be discussed on p. 209; see Figure 41.

¹ Among the Papers read at the meeting of the American Philological Association and Soc. of Biblical Exegesis at Columbia University on Dec. 28, 1915. Langdon, *Sumerian Epic of Paradise* (Bull. Mus. of U. of Pa. Babyl. Sect. X, 1), and N. Y. *Nation* of Nov. 18, 1915.

The marriage of the god and the goddess was commemorated by a festival. Gudea relates how he consecrates on this occasion marriage gifts in the temples. The festival was the spring festival called Zagnuku; Ward, p. 136.

² There is a peculiar Hittite cylinder (Ward 823), where a figure approaching the main deity holds by the neck in his right hand two serpents whose coils trail on the ground (Fig. 9). That this figure is a deity, though a subordinate one, is shown by the small size of the only human figure with hand raising a libation cup behind a sphinx or man-faced lion. Above him is the divine Bull with the sprig of the Tree of Life behind him and at the left end Gilgamesh kneeling and swinging the solar lion above his head. Whether the subordinate snake-swinging god is Ningishzida can be only a matter of opinion.

Having shown the evolutions of the forms of the caduceus-god we will now examine the representations of the caduceus as an independent emblem on the cylinders, but before doing so a short digression on the personality of Ningishzida as shown by Babylonian literary records is obviously necessary.

The only Babylonian ruler who mentions Ningishzida is the above-mentioned Gudea; and he, while naming this god as his patron, enumerates him at the end of his list of eighteen gods adored at Lagash (Shirpurla). Gudea has a dream which he asks the goddess Ninâ to interpret. She tells him that he has seen the supreme god, of colossal size, Ningirsu, crowned and with the sacred eagle, Im-gig, in his hand, the storm-wind at his feet and a lion crouching on either side: also a woman with a tablet and a man marking the plan of a temple on another tablet, showing that he should build a temple to Ningirsu. Then came a figure representing the rising sun, which the goddess identifies—after naming the others—as Ningishzida, saying: “The Sun which lifted itself up from the earth before thee, is thy god Ningishzida. Like the Sun he goes forth from the earth.”¹ In another passage Ningishzida is described as leading Gudea forth to battle and as his king. A separate temple was dedicated to his worship by Gudea.

It would seem as if this god’s worship was largely local and disappeared with the advent of the official pantheon established by the priesthood of Babylon under the dynasty of Hammurabi (ca. 2000 B.C.). The other records of his cult are from two sources, both of them archaic and pre-Hammurabi: the omen and incantation tablets and the legend of Adapa. In the incantation texts he is called “Throne-bearer of the Earth.” His connection with the serpent is attested in a birth-omen given by Jastrow which says: “If a woman gives birth to a child with a serpent’s head, it is an omen of Ningishzida, who will devastate the land; an omen of Gilgamesh, ruler of the Earth.” In another text Ningishzida sends fever through the land. He is said also to carry an axe as his symbol. In some magical texts where Ningishzida is among the minor solar deities invoked, it is not as a male but as a female deity and as the wife or consort of the sun-

¹Gudea, Cylinder A. 5; 19-20, in De Sarzec, *Découvertes*. For Ningishzida consult the index in Jastrow’s three works: *The Religion of B. and A.*; *Die Religion B. u. A.*; and *Aspects of Rel. Bel.*, including the sources and authors there quoted.

gods Nusku or Ninib or even of Gibil the primitive Fire-god. In Jastrow's opinion Ningishzida was one of the insignificant secondary deities that tended to disappear and to be absorbed in the more powerful deities. In this case the absorber would be Ninib. This was natural because Ninib is called "the first-born of Ea" and also as the rising sun or the spring sun, the offspring of the Earth (or "E Kur"), because he ascended from below the earth surface. The association with Nusku, on the other hand, is due to Nusku's character as a messenger of Anu, the supreme god of heaven, and of all the gods. In this sense, perhaps, Ningishzida is called in one of Gudea's texts the "Son" of Anu (Cyl. B 23, 5) and bracketed with Bau, the daughter of Anu (Cyl. E 8, 12-13), who is the consort of Nin-girsu, the supreme god of Lagash, and is the Mother Goddess who gives birth to mankind. It is not improbable that in the *connubium* scene described on p. 187 the union is that of Nin-girsu and Bau. In Gudea's text quoted above, Ningishzida's mother is called Nin-Sun (Cyl. B, 23, 5-6).

In one of the incantation series, that of the "Evil demons," the *Utukki limnuti*, the god Ningishzida is called "the Herald of the Earth."¹ All these are disconnected allusions.

The only narrative text in which our god appears is the myth called the Adapa legend, in which Jastrow² sees a composite story made up (1) of a lament for the disappearance from earth of the two gods of vegetation, Tammuz and Ningishzida, who represent the sun-god of the spring and bring vegetation but are carried away from the Earth with the waning of summer: (2) of an adventure of a certain hero or god Adapa who is obliged to appear before the Supreme God of heaven, Anu, to answer the charge of having broken the wings of the south wind, which was an evil storm wind.³ The god of the deep, Ea, father or protector of Adapa, advises Adapa to seek the intervention of two gods, Tammuz and [Nin] Gishzida, the guardians of the gates of heaven. Adapa is to appear at the gate in mourning garb and

¹ Jastrow, *Die Religion* etc., I, 354.

² Jastrow, *The Religion*, pp. 544 ff.; text and translation in Winckler and Abel, *Thontafelfund von El-Amarna*, Vol. III; Harper, *Die Babylonischen Legenden von Etana, Zu, Adapa und Dibarra* (*Beitr. z. Assyriol.* II).

³ This would seem to indicate that it was a fight of a solar hero against the storms of winter, in preparation for the return of spring, which would mean the return of Tammuz and Ningishzida to earth. This makes a logical nexus between the two parts of the story.

when asked the reason of his mourning is to answer: "Two gods have disappeared from our earth, therefore do I appear thus" and when he is asked who these two gods are he is to point out Tammuz and Ningishzida who will then intercede for him and take him to Anu. Now, in the early Babylonian calendar, the fourth month, or first month of spring, was sacred to Tammuz and the fifth month or second spring month to Ningishzida, while the sixth or first summer month was dedicated to the Mother Goddess Ishtar. The association of the two young gods of Spring is shown even in Gudea's list where Tammuz, in the form Dumuzi (or more fully Dumu-zi-abzu "Child of the deep"), is mentioned side by side with Ningishzida. Both were personifications of the springtime sun, coming out of the earth to put to flight the cold of winter and bring back life to the world. Both leave the earth as the summer closes and life wanes and their departure to the underworld, or to the gates of heaven, is mourned. They are like twin gods, but this twinship or similarity of function seems to have resulted in a confusion of sex. Sometimes Tammuz is the husband and Ningishzida the wife, and sometimes Ningishzida the husband and Tammuz the wife. Sometimes both are male, as when they are represented as the gate-keepers of the sun on the cylinders (*e. g.* Ward, Figs. 244 ff., esp. 269). In course of time Ningishzida fades away and only the earlier of the two spring gods, Tammuz, survives. The mourning is for Tammuz alone. The Mother Goddess Ishtar mourns for her lost lover Tammuz and seeks him in the regions below the earth, where he lies hidden in the winter time, seeking to bring him back in the spring to the waiting world so that by his means, she, the Great Mother, can bring life back again to all nature. Tammuz alone, therefore, became the prototype of Adonis, Attis and the rest of the lovers, emissaries and instruments of the Great Mother.¹

But before this elimination of Ningishzida, we can see in various early Babylonian cylinders and other works, representations of the twin youthful Sun-gods as the guardians of the gates of the sun, as opening the gates for the Sun-god to come through in the spring morning.

We can understand, now, why the incantation texts call

¹ For the Legend of the Descent of Ishtar consult Jastrow's three works: Jensen, *Keilinschriftliche Bibliothek*, VI, I, 80-91; Ungnad, in Gressmann's *Altoriental. Texte u. Bilder*, II, pp. 65-69.

Ningishzida the "Herald of the Earth," as he is the messenger of the Earth Mother, and also why he is called the throne-bearer of the earth, and the young Sun lifting himself up from the earth. We can also understand his hermaphroditic character, sometimes spoken of as male and sometimes as female, as soon as we realize that the two snakes of the caduceus are one male and the other female—a fact that will be discussed at some length toward the close, as well as in connection with the Tarragona tablet.

We now pass to the representations of the independent caduceus as an object of worship or a symbol.

The Independent Caduceus.—From the Gudea group and the correlated representations of Ningishzida it has become evident that the caduceus in itself was a god, and not merely an emblem, in very early Babylonian history. A study of the cylinders shows quite a number in which this independent caduceus appears as an object of worship, sometimes standing alone and sometimes flanked by supporting or attendant figures.

In some cases the snakes seem to grow out of the top of the wand and this seems undoubtedly a later form, related to the Greek caduceus, as compared to the more numerous and early forms in which the snakes' coils have not yet been eliminated but are wound about the whole length of the wand. When the evident connection between the coupled snakes and the Tree of Life is considered and the substitution of the tree for the caduceus by Assyrian art, one is driven to the conclusion that the wood of the wand, so carefully detailed on the Gudea vase, is the trunk of the Tree of Life. That the type with the snakes sprouting from the end of the wand is later, is confirmed by the analogy of the evolution of the anthropomorphic form of Ningishzida, from the figure encased in the coils to the figure with no coils but with the snake-tops sprouting from its shoulders.

In Ward 477 (Fig. 10) is a large caduceus, with central vase and coils wound tightly about the long staff. A hero of the Gilgamesh type stands beside it. The two main figures are of a god and goddess with a curious squatting figure between them, that seems to suggest a veiled form of the divine *connubium*. A similar crouching figure occurs in connection with the caduceus in Ward 424 (Fig. 11), where the nude goddess appears, and in Ward 428, described on p. 196 in connection also with a divine pair. The phallic character of the caduceus is emphasized in Ward

481 (Fig. 12) where a caduceus of the vase type is held up by two ithyphallic genii. An extremely schematic form is shown in Ward 335 (Fig. 13) where the caduceus must be imagined as



FIGURE 10.—(=Ward 477)



FIGURE 11.—(=Ward 424)

erect behind the seated god, instead of at the opposite end, as in the drawing. The connection with the crescent moon which we find here is emphasized in the crude cylinder Ward 1305⁸, where the caduceus shows the pointed end which all undoubtedly had, but which in other cases is driven into the ground (Fig. 14). In another carelessly tooled cylinder, Ward 237, there is a unique association of the colossal caduceus with two bulls backing up against it with fore-legs raised (Fig. 15). This may be compared to a cylinder in Kings' *History of Sumer and Akkad*, pl. opp. p. 76 with two bulls flanking the Tree of Life, and held by Gilgamesh and Heabani; and with Ward 200 where the rampant bulls alone flank the tree. The connection of the bull with fertility is well-known.



FIGURE 12.—(=Ward 481)



FIGURE 13.—(=Ward 335)

cylinder found in Cyprus (Fig. 17), is an interesting combination of both Babylonian and Hittite characteristics. The hero Heabani has the nude goddess on one side and the caduceus on the other.

These are all Babylonian works. Among Syro-Hittite cylinders we find in Ward 830 an echo of the Gudea vase (Fig. 16). Two human genii are here adoring a schematic caduceus. In Ward 1160, a

The Caduceus in the hand of a Goddess.—Far more numerous are the cylinders where the caduceus is held in the hand of a deity. Evidently Ningishzida, as a messenger, a mediating and



FIGURE 14.—(= Ward 1305a)




FIGURE 15.—(= Ward 237)

secondary god, and as an instrument in the right hand of a primary god, would indicate some important activity of this god. As both chthonic and solar he would naturally express the effect of solar heat on the moist earth in producing new life in the



FIGURE 16.—(= Ward 830)

spring. Since in Oriental thought the moist earth was primary and the solar heat secondary, since the Sun-god was the son of the Great Mother and rose into being out of the earthly waters, we should expect that a Right-

hand Sceptre-god would be placed mainly in the right hand of the Mother Goddess and only in a secondary way in the hand of a sun-god. 

This we find actually to have been the case. The caduceus is the common emblem placed in the hand of the Babylonian Mother Goddess, whom we shall call Ishtar, when she is represented as standing. There is no known case of her having it when she is seated. Why this difference exists can only be conjectured. I would suggest that possibly as a *seated* deity represents a *passive* condition, receptive of homage, etc., and a *standing* deity an *active* or aggressive condition, and as the giving of life to nature in



FIGURE 17.—(= Ward 1160)

the spring is an aggressive act, this might lie at the basis of the difference.

But there was still another reason. The single snake, the great earth snake was the primal embodiment of the Mother Goddess as the source of life. This was probably due to its fecundity, love of moisture and its response to the spring heat—characteristics that made it the emblem not only of life but of resurrection.

There are certain passages in the divination texts relating to snakes which show how closely the Babylonians associated them with life and with wealth. The following are taken from Dr. Jastrow's work:¹

"If a snake crawls up a man's foot it means a long life. That man will become rich and will cry out: 'Where shall I house my corn? Where shall I store my silver?'"

"If a snake falls upon a little child and frightens it, that child shall live under the protection of God.

"If a snake lies down on a little child, so shall it, whether it be male or female, obtain renown and wealth, or its father and mother will obtain renown and wealth.

"If a queen bears a snake the king will be strengthened."

As Dr. Jastrow says: "In the Semitic languages the ground-stem underlying the word for *snake* is identical with that of the word meaning *life* and a similar unity of concept between snake and life appear to lie at the base of the widespread belief among Indo-germanic races that snakes are the embodiment of dead ancestors."

In other words we must realize that in practically all ancient thought the snake was the typical life-spirit or *daimon*. That it was passed on to the Assyrians is shown, for example, in an apparently insignificant detail in the notable Assyrian relief of Bel fighting the Dragon, found in the palace of Assurnazirpal at Nineveh. In drawing the dragon the artist has made his phallus in the form of a serpent, so clinching the fact that the male serpent stood for the organ of generation in the ancient Oriental mind. This helps, later on, in the case of the Hellenic Hermes to span the distance between his two emblems—snakes and phallus.²

The lion, and the fruit or flower of the Tree of Life were, besides the single snake, the principal emblems of the Mother Goddess.

¹ *Die Religion*, II, 776 ff., 782.

² Layard, *Nineveh*, II, pl. 5.

This was an idea common not only to Babylonian, Assyrian, and Hittite art but to Cretan, Aegean, Mycenaean, and even developed Hellenic art. So this need not detain us.

Only this much may be done in this connection: (1) to clear up a misunderstanding which has prevented our identifying the fruit of the Tree of Life in connection with Ishtar; (2) to show



FIGURE 18.—(= Ward 428)



FIGURE 19.—(= Ward 1278)

how the lion was not merely the foot-stool of Ishtar but part of her nature, and (3) to demonstrate that the single serpent as well as the caduceus was currently used both as an independent emblem and as an emblem held by a deity, and that this single serpent must not be confused with the caduceus. In Ward 428 (Fig. 18) on the extreme left is a large puff adder of the usual upright



FIGURE 20.—(= Ward 413)

type, while next to it, in the upper register, is the caduceus standing independently on a flat base, and, beyond, the familiar nude goddess as a statue on a base.

In Ward 1278 is a particularly well done single snake backing up against a god whom Ward calls Shamash, probably because he rests one foot on what seems a conven-

tional mountain (Fig. 19). Such a single snake is twined around a pole in an inscribed Hittite cylinder (Ward 796) and held up by a god as his emblem.

Now Ishtar (and her prototype Bau) was the only thoroughly independent goddess of the Babylonian pantheon. The other goddesses were but pale reflections or counterparts of male

originals. Ishtar is the mother of the gods, mistress of the gods, mother and creator of mankind, the personification of fertility, of productivity, the source of all life, the beauty of heaven, the associate of the sun and moon gods, the helper in divination.

In the earlier type, that of the seated goddess, she does not, as I have said,

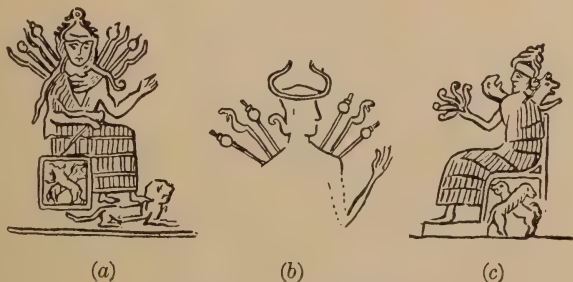


FIGURE 21.—(= Ward p. 377)

hold the caduceus, but instead there radiate from her shoulders certain objects that are emblematic of her power. Sometimes

they are a line of straight stems ending in a bulb, as in the relief of the Elamite ruler of the Lulubi (Fig. 20). More often these are in alternation with the upper part of snakes. The bulbs are seen to be identical with the fruit growing on many representations of the Tree of Life which is a com-



FIGURE 22.—(= Ward 685)

mon object of worship on Babylonian and later cylinders. It is also identical in shape with the poppy head or pomegranate which alternates with ears of corn in the bunch held by the Greek Mother Goddess. It is logical that the principle of fertility, the snake, and the embodiment of its action, the fruit of the Tree of Life, should be the earliest emblems of the Mother Goddess. In Figure 21 are some impressions of early seals from Telloh, from Heuzey, of extraordinary value. In *a* and *b*, the Life-fruit and the Serpent alternate in growing out of the god-



FIGURE 23.—(= Ward 763)

ness. In Figure 21 are some impressions of early seals from Telloh, from Heuzey, of extraordinary value. In *a* and *b*, the Life-fruit and the Serpent alternate in growing out of the god-

dess' shoulder. In *c*, the snakes radiate in a bunch from her right hand, while it is lions that grow from her shoulders. It was easy to mistake such bulbs for the bulbous head of a warlike mace (Fig. 21), but besides the proof given by this identity in



FIGURE 24.—(= Ward 464)

such thing as a mace or any kind of weapon could have been intended (Ward 464: compare Fig. 21*c*). In fact they are the prototype of the aureole with which Assyrian art encompassed the goddess (Fig. 25), whose rays or spokes end in just these knobby fruits of the Tree of Life (Ward 705). The conversion of solar rays into these fruits is shown graphically in the cylinders and admits of no doubt. If one compares the winged genius in Figure 25 who is fertilizing the aureole with Figure 23 (Ward 763) and 28 (Ward 685) where the process is going on under the sun-rays, the connection is evident; even closer is the analogy in Figure 22.



FIGURE 25.—(= Ward 705)

Compare also Figures 29 and 30.

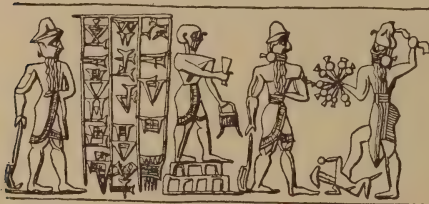


FIGURE 26.—(= Ward 446)

holding a weapon. Evidently here also the bunch is not a weapon. In some cases (Fig. 33) it is more like a two-storied flower (Ward 449); both with the god and the goddess, as when it grows out of her shoulders. The god in these cases is re-

The radiating bunch of bulbs is held also by a god (Fig. 26), especially when he has a prostrate human figure near or under his feet and stands with other hand raised (Ward 446),

garded by Ward as probably Nergal, god of dessicating mid-summer heat, but his identity is quite uncertain.

Then there is the case of the branch of the Tree of Life with its three fruits, held by a god in the important seal of Dunghi, King of Ur (Fig. 27 = Ward 436). The moon-god Sin was chief-god of Ur and it is apparently he who appears, with the king as worshipper. He carries the singlesnake staff in his left, the wand with three bulbs of the Tree of Life in his right, and in front of him is the vase with two streams of the water of life ending in fronds or bulbs and with the Tree of Life rising in the centre. Dr. Ward says (p. 164) that what the god carries in his right is "a triple club, the three knobs of which indicate its terrible character." But that this is really a branch of the Tree of Life can be proved by its exact duplicates in Figure 28 (Ward 696), where two genii have each plucked a branch with three of these bulbs from the tree, and Figure 29 (Ward 692), where four of these branches are growing near the base of the tree. Ward 688 is like Figure 28 in having two genii holding



FIGURE 27.—(= Ward 436)



FIGURE 28.—(= Ward 696)

the branch. This branch with the three bulbs is found in the hands of Assyrian genii adoring the Tree of Life: see Perrot and Chipiez, II, Fig. 29. I may be pardoned for introducing here from Mycenaean art (Fig. 30) the famous gold Signet-ring from Mycenae, with the Mother Goddess seated under the Tree of Life and holding the bunch of three "poppies" (?) almost identical with these Babylonian groups of three.

This matter of proving such bulbs whether single or as a branch or radiating from a centre to be part of the Tree of Life instead of weapons, to be symbols of



FIGURE 29.—(= Ward 692)

fertility instead of destruction, and that this is also true of the snake sword, has been dwelt upon rather fully because it radically changes the meaning of many scenes in Babylonian, Assyrian and Hittite art.¹ In fact, it may be said to strike at the root of a very serious misconception of modern scholarship, which lays emphasis upon the element of fear and of destructiveness in its interpretation of ancient religion.²

Returning now to the seated goddess, there are two very unusual features that bear on the previous questions which are noted by Heuzey in connection with certain figures of the goddess in the early Babylonian monuments of Lagash (Shirpurla-



FIGURE 30.—SIGNET RING FROM THE AKROPOLIS, MYCENAE

Telloh), already referred to in connection with Fig. 21. She sometimes holds in her right hand an emblem which on close examination proves to consist of a bunch of serpents: some-

times there are seven, which was, of course, the sacred or complete number. This supplements my previous argument, because it shows that both the emblems that radiated from the goddess' shoulders, serpents as well as tree fruits, were grouped into a sceptre for her right hand.³

¹ Assyrian cylinders are cited side by side with Babylonian cylinders because in so fundamental a matter as the ideas at the basis of the sacred tree and sun-worship, the kinship was very close.

² I expect to show in another paper that this has vitiated a large part of our ideas. Clubs, whips, swords, scimeters, daggers, hammers, axes, etc., must be thrown largely into the discard as emblems and weapons of destruction. Where they do inflict death—which they do much less frequently than is supposed—it is as a rule for the purpose of creating new life.

³ Heuzey mistook the lines below the face of Ishtar for a beard and so thought it was a god instead of a goddess. Ward corrects this error.

The second unusual feature in a rare type is where the lions that are the third emblem of the Mother Goddess, instead of being merely her footstool or the adjuncts to her throne are made to grow out of her body at each shoulder (Ward 421 and p. 377) exactly as the snakes do in the Gudea type of Ningishzida figures (see Figs. 6 and 7). They thus become a real hypostasis of the goddess. They emerge so as to show their bodies below the forelegs. The lions are repeated, crossed and rampant under the seat of the throne. This has already



FIGURE 31.—(= Ward 212)



FIGURE 32.—(= Ward 414)

been noted under Fig. 21. This scene is made up by Heuzey from a number of imperfect impressions of seals on the Telloh tablets. The type of the standing goddess Ishtar is considered to be somewhat later than the seated type, a creation of the Middle Empire, but hardly later than *ca.* 3500–3000 B.C. as it appears in works of the time of Dunghi, King of Ur, and Gudea, King of Lagash. The favorite emblem of the standing Ishtar is the caduceus, held in her right hand. A number of typical instances are given by Dr. Ward. In Ward 212, 414 and 417 (Figs. 31, 32, 33) the cylinders represent Ishtar with her right foot resting on a lion, with the caduceus as a long wand in her right, and the *harpê* or snake-scimeter hanging from her left hand. Her upper part is in front view: her lower part in profile. Another type is of the full-faced goddess standing on two lions, one under each foot (Ward 415,



FIGURE 33.—(= Ward 417)

442), with the caduceus in her right hand (Fig. 34). A very interesting scene in Ward 210, introduces a variation (Fig. 35). Ishtar is holding the caduceus with the vase rising between the



FIGURE 34.—(= Ward 442)

snake necks and it seems to rest on a small figure of the nude front-faced goddess Zirpanit in her common attitude of hands pressing her breast. She represents, as I have said elsewhere, the feminine reproductive element in Ishtar. Ramman, the god of rain and storm, is beyond, while back of Ishtar is the solar hero Gilgamesh from whom flow the life-giving streams of water. It is a synopsis of the productive forces. This cylinder is of northern art. The cylinder in Ward 418^a shows Ishtar with a vaseless caduceus and no lions. In Ward 135 the lions under her feet are replaced by two winged dragons. The caduceus in Ward 416 is also vaseless. The wand usually ends in a globe-like bulb at the base and has serpent coils along its whole length except in 418^a. In the two groups of projections from the goddess' shoulders we must recognize, as in her seated figure, the fruits of the Tree of Life. This is particularly easy to identify in Ward 414 (Fig. 32).



FIGURE 36.—(= Ward 440)



FIGURE 35.—(= Ward 210)

The above-mentioned examples cover fairly well the various types of the caduceus-bearing goddess, and show that in this standing attitude she was not a warlike figure but the aggressive Mother Goddess.

The Caduceus in the hand of a God.—

The caduceus was in a few cases connected with other divinities beside the Mother Goddess, that is with one if not two male deities. In Ward's 440, a figure supposed to be the Sun-god, Marduk, the supreme god of Babylon, holds the caduceus in his right and the *harpê* or sickle-shaped sword in his left (Fig. 36). It is impor-

tant to note that the sickle in this case shows plainly its snake origin. It is a snake with curved neck. One can follow the evolution of the sickle-sword from its primitive snake form with long body until in Assyrian art it reaches the straight-handled naturalistic form in which it passed to the Hellenic Perseus. This weapon was that used by Marduk in his fight with the Dragon Tiamat and the powers of Chaos or with the lion, the bull or the bird (Fig. 37 = Ward 615). The god—probably Sin—represented in a cylinder of Dungi, King of Ur (*ca.* 3100 B.C.), carries



FIGURE 37.—(= Ward 615)

on his shoulder a wand ending in a single serpent with curving neck; see Fig. 27.



FIGURE 38.—(= Ward 1027b)

There is (Fig. 38) an interesting Hittite cylinder (Ward 1027^b) in which the principal deity advances with raised right leg holding a colossal caduceus in his right and a lowered weapon

composed of two separate curving snakes in his left. This latter confirms the serpent derivation of the weapon on Babylonian cylinders which I have called the serpent-scimater, prototype of the harpê. Facing him is a figure holding two serpents in the right hand. The caduceus in this scene is quite unorthodox. Similarly schematic is Ward 1020, another Hittite work (Fig. 39) where the god, who is fighting a lion, holds the caduceus in his left as well as a pendant animal.¹

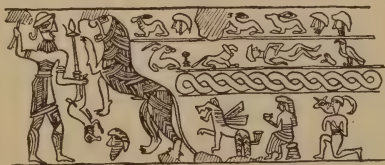


FIGURE 39.—(= Ward 1020)

The case for the caduceus in Western Asia may be summed up, therefore, as follows: At an extremely early period, not far from

¹ These two cases make it almost certain that in Ward 1027^a we have not a trident but a schematic caduceus.

4000 B.C., the Babylonians evolved the caduceus in the form of a plain wooden staff with two serpents coiled around its entire length, and they worshipped this caduceus as a god of spring and fertility and as messenger and agent primarily of the Mother Goddess and secondarily of the Sun-god. This god received in certain Babylonian circles the name Ningishzida, and was worshipped in human form as well as under the form of the caduceus. In Assyria and Persia there is no trace of the caduceus or caduceus god, but on the other hand both emblem and god passed from Babylonia to the Hittites and to Syria and Cyprus, and can be connected with the passing from the Babylonians to the Syrians of the cult of the counterpart of Ningishzida, the young spring god Tammuz.

The Hittite Caduceus-god of Hierapolis.—I have left out of the discussion until now what is altogether the most important proof of caduceus-cult among the Hittites: the group of three gods worshipped at Hierapolis in North Syria. This was one of the most sacred centres in Western Asia down to a late Roman period and was extraordinarily conservative in its cult and liturgy. It has had the advantage of a fuller exposition by an ancient author than was given of any other sacred fane. It is in the treatise *De Dea Syria* by Lucian, which can be supplemented by the *Saturnalia* of Macrobius.¹ The Hierapolis triad consisted of the Mother Goddess, who was supreme, of a coördinate yet subordinate male deity, the son-husband, and of a mysterious youth or nondescript emblem. The goddess was Atargatis and she was attended by lions: the god was Hadad and his attendants were two bulls. Lucian calls them Zeus and Hera simply to make them conform as far as possible to Hellenic ideas, but he admits that the Goddess has attributes of several other goddesses. I quote the most pregnant passages of Lucian from the translation given in Strong and Garstang, *The Syrian Goddess* (London, 1913). "There is in Syria a city not far from the river Euphrates: it is called 'The Sacred City' and is sacred to the Assyrian Hera

¹ Lucian was born at Samosata about 125 A.D. and calls himself a Syrian or Assyrian. He practised law at Antioch; visited Syria, Phoenicia and Egypt, was interested in philosophy and religion, visited many important centres of ancient cult, went to Rome for two years in *ca.* 150, spent ten years in Gaul, returned to the East, travelled through Asia Minor, and settled at Athens. Consequently he is well equipped to describe and interpret any monuments of oriental religion.

[i.e. Atargatis], (p. 41). The great temple is open to all; the sacred shrine to the priests alone and not to all even of these, but only to those who are deemed nearest to the gods and who have the charge of the entire administration of the sacred rites. In this shrine are placed the statues, one of which is Hera, the other Zeus, though they call him by another name. Both of these are golden, both are sitting; Hera is supported by lions, Zeus is sitting on bulls. The effigy of Zeus recalls Zeus in all its details—his head, his robes, his throne; nor even if you wished it could you take him for another deity. Hera, however, as you look at her will recall to you a variety of forms. Speaking generally she is undoubtedly Hera, but she has something of the attributes of Athene, and of Aphrodite, and of Selene, and of Rhea, and of Artemis, and of Nemesis, and of the Fates. In one of her hands she holds a sceptre, in the other a distaff; on her head she bears rays and a tower and she has a girdle where-with they adorn none but Aphrodite of the Sky. And without she is gilt with gold, and gems of great price adorn her, some white, some sea-green, others wine-dark, others flashing like fire. Besides these there are many onyxes from Sardinia and the jacinth and emeralds, the offerings of the Egyptians and of the Indians, Ethiopians, Medes, Armenians, and Babylonians. But the greatest wonder . . . she bears a gem on her head called a Lychnis. . . . From this stone flashes a great light in the night-time, so that the whole temple gleams brightly as by the light of myriads of candles. . . .

“Between the two [gods] there stands another image of gold, no part of it resembling the others. This possesses no special form of its own, but recalls the characteristics of the other gods. The Assyrians themselves speak of it as a symbol [*σημήϊον*, “*semeion*”], but they have assigned to it no definite name. They have nothing to tell us about its origin, nor its form: some refer it to Dionysus; others to Deucalion; others to Semiramis; for its summit is crowned by a golden pigeon, and is why they allege that it is the effigy of Semiramis. It is taken down to the sea twice in every year to bring up the water of which I have spoken.” This attempted description by Lucian of the third image of the group of cult statues in the temple is a descriptive failure, so that the form of it has remained a mystery, for what he says is merely negative. It occupied a central position between the enthroned pair, but it was not a human figure. It was called

by the Syrians "Semeion"; had no resemblance to either of the other figures but represented some of their characteristics. His last sentence is interesting as it shows that the image could hold water and was the means of reconsecration of the temple.

Six quotes the Syrian writer Melito¹ as making Simo the daughter of Hadad, who draws water in the sea [*i.e.* Euphrates] and throws it into the sacred temple chasm. Another legend makes the daughter of Atargatis and Hadad to be Semiramis. On the other hand Diodorus (II, 4) turns "Semeion" into "Simios," a youth who was the lover of Atargatis. Dussaud has proposed to see in Simios the Son-lover of the goddess and compares the Hierapolitan triad Hadad-Atargatis-Simios with the Heliopolitan triad, Jupiter-Venus-Mercury.

The passage of Macrobius is more specific, both as to the original names of the two gods and as to their solar characteristics (*Sat.* ch. 23): "The Syrians give the name *Adad* to the god, which they revere as first and greatest of all;² his name signifies "The One." They honour this god as all powerful, but they associate with him the goddess named *Adargatis*, and assign to these two divinities supreme power over everything, recognizing in them the *Sun* and the *Earth*. Without expressing by numerous names the different aspects of their power, their predominance is implied by the different attributes assigned to the two divinities. For the statue of *Adad* is encircled by descending rays, which indicate that the force of heaven resides in the rays which the sun sends down to earth: the rays of the statue of *Adargatis* rise upward, a sign that the power of the ascending rays brings to life everything that the earth produces.³ Below this statue are the figures of lions, emblematic of the earth; for the same reason that the Phrygians so represent the Mother of the Gods, that is to say, the earth, borne by lions."

Cumont⁴, in discussing the formation of triads in the evolution of oriental local cults, especially in Syria, says: "To the primitive

¹ Six, in *Num. Chron.* 1878, p. 119-120.

² This is, of course, an error on the part of Macrobius, so far as Hierapolis is concerned, where the goddess was supreme and the god quite secondary: a relation quite general in Asia Minor and Syria.

³ Rather does it symbolize the universal ancient belief in the origin of the Sun from the earth.

⁴ *Oriental Religions in Roman Paganism*, pp. 123, 250: cf. Perdrizet, *Rev. Etudes anc.* III, 1901, p. 258: Dussaud, *Notes de Mythologie syrienne* (Paris, 1903), p. 24, 115; Jalabert, *Mélanges fac. orient. de Beyrouth*, I, 1906, pp. 175 ff.

couple of the Baal and the Baalat a third member was added in order to form one of those triads dear to Chaldean theology. This took place at Hierapolis as well as at Heliopolis, and the three gods of the latter city, Hadad, Atargatis and Simios, became Jupiter, Venus and Mercury in Latin inscriptions."

We have, then as the third figure of the Hierapolitan triad, a youthful person, sometimes thought of as male, sometimes as female, offspring and lover of one or both of the principal deities.

That some part in the ancient cult was taken by a youthful god or hero who stood in some intimate relation to the Mother Goddess is also certified by the various traditions as to the founding of the temple reported by Lucian. Its antiquity is claimed in the story of its foundation by Deucalion—Xithuthros after the Flood; or by Semiramis in honor of the fish goddess Derceto (=Atargatis); or by Attis in honor of Rhea, whose sacred mysteries he taught to the Phrygians, Lydians, Samothracians, etc.; or by the youthful Dionysus in honor of his "step-mother" Hera, to whom he dedicated the two enormous phalli that Lucian saw in front of the temple. The story that Lucian relates of the building of the second temple by a handsome youth named Combabus for the Assyrian queen Stratonice, hinges about his castrating himself to avoid scandal and the consequent custom of castration at the shrine. This story seems based on the legends of Ishtar and Tammuz, Cybele and Attis, Astarte and Adonis, etc. It is of interest mainly in its bearing on the local question of the third deity of the Heliopolitan triad.¹

¹ After the "Semeion" Lucian describes other statues in the temple, which are of real interest as helping to understand the character of the local cult: (1) a throne for the Sun-god, without any image; (2) Behind the throne a statue of Apollo, unusual because bearded and robed; (3) Behind Apollo a statue of Atlas; and (4) behind that a statue of Hermes and Eilithya. To supplement the brief description of the Apollo we have the passage in the *Saturnalia* of Macrobius (I, XVII, § 66, 77) who says: "The Hierapolitans, a Syrian people, assign all the powers and attributes of the Sun to a bearded image which they call Apollo. His face is represented with a long pointed beard, and he wears a *calathos* on his head. His body is protected with a breastplate. In his right hand he holds upright a spear, on the top of which is a small image of Victory; in his left is something like a flower. From the top of his shoulders there hangs down behind a cloak bordered with serpents [*i.e.*, an aegis]. Near him are eagles, represented as in flight: at his feet is the image of a woman, with two other female forms right and left; a dragon enfolds them with his coils." One is tempted to see in this description a corrupt passage which originally described a caduceus-deity flanked by two adorers. Frazer and Garstang are probably right in the equation Apollo = Sandan = Attis.

The key to the mystery is supplied by a Roman coin of Hierapolis of the third century which reproduces the group of cult statues who are identified as such beyond question by the inscription ΘΕΩΙ CYPIAC IEPOΠΟΛΙΤΩΝ "The gods of Hierapolis of Syria." This type was struck at Hierapolis with slight variations under Caracalla and Alexander Severus.¹ This coin is enlarged in Figure 40. The supremacy of Atargatis is indicated by the lion at the base. We recognize the goddess with her lions on the right, and the god with his bulls on the left. The stiffness of the images would indicate an early date. In the centre is the mysterious Semeion, Simi or Simios. We see what



FIGURE 40.—THE TRIAD OF SYRIAN GODS OF HIERAPOLIS (Coin of Third Cent. A.D.)

is evidently a tabernacle with gable and roof. On top perches the dove, as Lucian describes. Inside stands a staff encircled by what seem at first glance to be four circles or wreaths. Numismatics have more or less half-heartedly accepted the opinion of Six that this is a Roman standard or legionary eagle. No archaeologist can agree to this after reflecting for a moment on the absolute impossibility of supposing a Roman standard to have been substituted

for a god in the *sanctum sanctorum* of so holy and ancient a city as Hierapolis. Besides, there is in this image not the least resemblance to Roman standards or to their commonly known coin types. The fact of the matter is that the circles are not the solid medallions of Roman standards but are serpent coils. The shadows and lines show that there is a continuity and not a solu-

¹ Six, in *Numismatic Chronicle*, 1878, p. 119; Pellerin, *Mélange*, I, p. 189, pl. VIII, 12; *Numi vet.*, pt. II, tab. III, 2; Imhoof, *Griech. Münz.*, p. 759, No. 772; Strong and Garstang, *The Syrian Goddess* (London, 1913, pl. I, and Fig. 7). The enlarged cut in Fig. 7 of the latter work is quite inaccurate in the details of the central part, making complete circles with shadows that do not exist on the coin, in order to make it seem like a Roman Standard.

tion of the curved lines.¹ The third figure, then, is evidently a caduceus-god, worshipped in almost exactly the form in which he appeared on the Gudea vase.

We can now appreciate that the Heliopolitan trinity of Zeus—Aphrodite—Hermes, is so truly, as Dussaud suggests, the analogue of the Hierapolitan, that we can say Simios = Hermes.²

Also we can see, from the description in Macrobius, how Simios would naturally be the spring sun. Remember that the statues of both Atargatis and Hadad had solar rays; that those of Atargatis shot upward and those of Hadad shot downward. In other words, that the sun was born out of the earth before gaining the power to react upon it. Simios symbolized perhaps the mingling of the emanations from the two principles.

The Phœnician Tablet of Tarragona.—There is in the museum of Madrid a polychromatic Phœnician tablet³ in which Milani sees the *connubium* of the two primordial deities, or, as he puts it, the *ἱερός γάμος* of Baal and Tanit, the supreme Phœnician gods (Fig. 41). Notwithstanding the fragmentary condition of the tablet it is evident that it was circular, representing the cosmos, surrounded by water, with fish, birds (?) and snakes. Within the border are the sun [moon], and stars. Below are two palm trees, the staminate male palm and the pistillate female palm. Beyond them are the two snakes, both erect and winged; the male snake, horned and with butterfly wings near the male tree, and the female snake, with a line of teats and bird wings near the female tree. A wing on the left shows there were birds. Flames issue from the earth in the centre. The central group consists of two figures, the male on the right, and the female on the left. By their interaction they are producing life

¹ The drawing from which my Figure 40 is reproduced was made without preconception by a clever miniature artist whose trained eye can be depended upon. The drawing from the coin in Garstang not only changes the real outlines—unconsciously of course—but adds some ball-like excrescences which do not exist in the coin.

² Hermes in the form of a boy seems to be represented, at his birth, on a Palmyrene altar to the Sun-god. The boy is born from the cleft of a cypress tree, from which he half emerges, holding a ram with both hands, a youthful Hermes Kriophoros. The fact that this figure has been called Attis and Adonis merely emphasizes the essential connection, which should be extended to Osiris, Tammuz, etc.

³ Ladelei, in *Atti dell' Accad. pontif.* t, 38, 4, February 1885; Milani, *Studi e materiali*, I, Fig. 4, pp. 37–39.

from two sources: the sperma issuing from the body of Baal, passing to and out of the body of Tanit in a concentric spiral motion which finally centres in a human-face embryo. The spiral fluid is inhabited by moving animal corpuscles and is being nourished by milk flowing from the breast of Tanit, whose body is wrapped in decorative zones similar to those on the well-known figures of the Diana of Ephesus. This represents the element of moisture. The element of heat is represented by the flames springing from the earth and diffusing warmth through

the vital protoplasms.

The second form of vital interaction is more spiritual and is represented by the flying bodies that pass between the open mouths of the two human figures, or rather from Baal to Tanit. They are in the form of alternating small winged creatures and tiny globular objects. As the first form of intercourse referred to the creation of the material universe, this second form evidently symbolises the creation of the soul. It is a well-known fact that in practically the entire ancient world "soul" and



FIGURE 41.—THE ORIGIN OF LIFE: PHOENICIAN TABLET AT MADRID.

"breath" were synonymous and also that the soul's emblem was often the butterfly.

It is allowable, I think, to infer that in the scheme of the origin and recurrence of life expressed in this Phoenician monument, all terrestrial life—of plants and animals—is due to the union at the beginning of the universe of the two principles of heat and moisture individualized in the two human figures. This Babylonian scheme, therefore, which was treated on pp. 187ff., appears to have survived in Syria and Phoenicia to a late date, because we can hardly date this tablet from a period much earlier than

the Alexandrian age. Baal and Tanit are merely names for the two supreme gods that correspond to the Babylonian pair.

This Phoenician tablet is particularly valuable in being the counterpart of the Hierapolitan triad in the sense that it shows the cosmogonic side of the Oriental scheme of the universe while the Hierapolitan group expresses the same idea from the theological point of view, though the third figure is an archaic cosmogonic survival which had been in most other forms of the cult sloughed off in favor of a purely anthropomorphic form of the triad.

This brings us to the end of the Oriental evolution of the caduceus. The next and concluding paper will take us to Italy at a very early date and will show the caduceus as the house-god of the early Latins and of primitive Rome; and the Etruscans as having brought to Italy the Hittite and Babylonian caduceus-god.

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PRINCETON, N. J.
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P. S.—Since going over the first proof I have read the careful study of the Heiropolitan deities and coins in A. B. Cook's *Zeus*, I, pp. 582–589. He reproduces not only the coin-type I have used but (Fig. 448) the coin of Caracalla with the figures in smaller size and an eagle below in place of a lion. Of the central "figure" he says: "This sceptre or standard is neither "anthropomorphic nor theriomorphic, but the four medallions, "if such they are, that are hung upon it may well have borne "the effigies of the temple-deities. On the whole it seems "probable that a royal sceptre or standard enclosed in a shrine "of its own, was the central object of worship." This is but a variant of the Roman Standard theory. As we have seen, the object *is* theriomorphic.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

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GENERAL AND MISCELLANEOUS

Rock Architecture in the Mediterranean Basin.—Under the title *Über Felsarchitektur im Mittelmeergebiet* (Mitt. Vorderas. Ges. XIX, 1914, Pt. 2. 96 pp.; 40 figs.), E. BRANDENBURG publishes a study of the rock-cut structures in the Mediterranean basin. These include dwellings, stables, cuttings serving as supports for vessels, and places of refuge. He also discusses the use of wood in these buildings. He would date the earliest of the artificial grottoes at the end of the neolithic period; and the earliest of the large grottoes at the beginning of the Bronze Age, or about 2500 B.C. About 1400 B.C. came the imitation of wooden buildings in stone, and this attained its highest development about 1000 B.C. in the Phrygian façades. From about 300 B.C. to the Christian Era there was a revival in the construction of grottoes, and about 1300 to 1500 A.D. a second revival. In another part of the book he discusses rock cuttings for cult purposes, shrines, niches, steps, carved reliefs, etc.; also graves and catacombs, unidentified forms, and finally the rock dwellings of North Africa. Rock architecture spread from Persia and Armenia to Syria, Palestine, Malta and Italy. It was especially common in Hittite territory in the third millennium B.C.

The Migrations of Early Culture.—Under the title *The Migrations of Early Culture* (London, New York, Bombay, 1915, Longmans, Green & Co. 143 pp. 8vo. \$1.25 net. Reprinted from *Memoirs and Proceedings of the Manchester Literary and Philosophical Society*, Vol. 59, Pt. 2), GRAFTON ELLIOT SMITH argues that the practice of mummification, of erecting megalithic monuments, etc., found in various parts of the world, originated in Egypt; that about 800 B.C. this "culture" began to migrate until it spread over the world, crossing the Pacific to the coast of America.

The Mounds of Macedonia.—In *B.S.A.* XX, Session of 1913-1914, pp. 123-132, A. J. B. WACE gives a list of the mounds of Macedonia. In the pre-

¹The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Mr. L. D. CASKEY, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor CHARLES R. MOREY, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER, and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1915.

For an explanation of the abbreviations, see pp. 123-124.

historic mound near Serfje the sherds found are of the First and Second Thessalian Periods. The mounds of the Salonica district are (a) funereal mounds (34 in number, so far as listed) and (b) prehistoric settlements (26 in number), the character of which is proved by the pottery found—undecorated, incised, painted with Macedonian and Thessalian patterns, imported Mycenaean ware, and ware which seems to be imported geometric pottery, though it may be of local manufacture. A third type of mound is that of (c) Greek town sites, ten in number.

Thracian Archaeology.—In *R. Arch.*, fifth series, II, 1915, pp. 165–208, GEORGES SEURE continues his discussion of little known Thracian inscriptions. No. 134 is a replica of *C.I.L.* III, 6123 and 14207. It sheds light upon the military and other roads of Thrace, which are discussed. No. 135 is a fifth copy of the frontier stone placed under Hadrian between the Moesians and the Thracians (*C.I.L.* III, 749, p. 992, 12407, 14422). Nos. 136–139 are mile-stones bearing the name of the city of Sexaginta Prista (Roustchouk). Nos. 140–142 are inscribed on a milestone from Stambolovo. The emperors mentioned are Licinius and Constantine (for whose names those of Theodosius and Arcadius were later substituted), Valentinianus, Valens and Gratianus, and Valentinianus, Theodosius and Arcadius. No. 143, on the base of a statue, bears the names of L. Septimius Severus, Marcus Aurelius, and (erased) Geta. No. 145 is on a pedestal erected in honor of Caracalla. Nos. 146 and 147 are honorary inscriptions, the first in honor of an athlete of Trajana Augusta, the second in honor of a citizen of Trajana Augusta, who was an honorary citizen of Sparta, where he had doubtless studied philosophy. The date is apparently the second century A.D.

The Stele of Darius on the Tearus.—The spot at the sources of the river Tearus in Thrace, where, according to Herodotus IV, 89–91, Darius Hystaspes, on his expedition against the Transdanubian Scythians in 514 B.C., set up an inscription to commemorate the excellence of the waters, was apparently identified by E. UNGAR, in June–July, 1914, with the help of Herodotus's detailed description, as at Jene (Jenno), a place on the road from Seraj to Kirk Kilissi. It is about equally distant, as Herodotus says, from Apollonia on the Black Sea (Sizeboli, on the bay of Burgas) and Heracleion near Perinthus (Eregli) on the Sea of Marmora. The stele itself is missing, but the oblong socket into which it fitted, on a stone of the ancient wall at the head of the spring-basin, is still there, and the water still flows, in two streams of great purity and abundance. The length of the socket is at right angles with the direction of the wall, so that both sides could easily be read, which suggests the probability that the inscription was bilingual, Greek and cuneiform, like that of Darius's Bosphorus stele (Hdt. IV, 87). It is to be hoped that at least some fragments of the stele itself may in time come to light. (*Arch. Anz.* 1915, cols. 3–16; 4 figs.)

The Omphalos.—Under the title *Neue Omphalosstudien* (*Abh. der phil.-hist. Klasse der kgl. Säch. Gesellschaft der Wiss.* XXXI, No. 1. Leipzig, 1915, Teubner. 90 pp.; 7 pls.; 58 figs. M. 4.40), W. H. ROSCHER publishes a second paper on the *omphalos* (see *A.J.A.* XVIII, 1914, p. 524). He discusses further the meaning of the word, revises and adds to his account of the *omphalos* among various peoples, discusses its connection with the oracles at Delphi and at Didyma, the monumental evidence for it at Delphi, grave monuments in the form of an *omphalos*, and doubtful examples.

The Omphalos among the Celts.—In *R. Ét. Anc.* XVII, 1915, pp. 193–206 (9 figs.), J. LOTH sets forth the evidence, both literary and archaeological, for the cult of the *omphalos* among the Celts.

Unknown Gods.—In *Arch. Rel.* XVIII, 1915, pp. 1–52, O. WEINREICH discusses questions relating to “unknown gods,” and examines the evidence for that expression.

A Prehistoric Rattle.—In *L'Homme préhistorique*, II, 1914, pp. 276–282 (3 figs.), H. ARAGON shows that a terra-cotta object of peculiar shape with holes in it found at Ruscino in 1910 is a prehistoric child's rattle.

Trenches in Ancient Warfare.—In *R. Ét. Gr.* XXVIII, 1915, pp. 103–128, V. CHAPOT discusses the use of ditches and trenches in warfare by the Greeks and Romans.

A History of Classical and Italian Art.—In Parts 21 and 22 of the *Storia dell'Arte Classica e Italiana* edited by G. E. Rizzo and P. Toesca, Professor TOESCA continues his discussion of the minor arts in Italy down to the end of the eighth century A.D., and begins his discussion of the architecture from the end of the eighth to the eleventh century. Notes accompany the text. [G. E. RIZZO e P. TOESCA, *Storia dell'Arte Classica e Italiana*. Fasc. 21–22. P. TOESCA, *Storia dell'Arte Italiana*, Vol. III, pp. 321–384; figs. 194–231. Turin, 1915, Unione Tipografico-Editrice Torinese. 4to. 21.]

The Gundestrup Bowl.—A round silver bowl or kettle, decorated with barbaric reliefs on the rounded floor and on the outside and the inside of the cylindrical portion, which has been much discussed since it was found in 1891 in Jutland, Denmark (see *A.J.A.* XII, 1912, pp. 447–448), is again exhaustively studied in its historical aspects by F. DREXEL, in *Jb. Arch. I.* XXX, 1915, pp. 1–36 (29 figs.). In its mixture of Celtic with early Ionian and other elements of style or subject, he finds evidence of an origin, probably in the middle of the first century B.C., in some Celtic community on the middle or lower Danube, which had commercial and friendly relations with the kingdom of Pontus. This indicates the Celtic Scordisci, at that time established in the Balkan peninsula and allied with the Dacians and with Mithridates Eupator, the most famous of the kings of Pontus. The Greek features include reminiscences of the divinities of the animal kingdom, both male and female, a dolphin, a Pegasus, heraldic animals, griffins, birds, etc.; the stag-god (Cernunnus), the wheel-god (god of war), a trinity of deities, a human sacrifice, a parade of soldiers, horned helmets, etc., are Celtic. The relief on the floor of the kettle is an extraordinary attempt to render the figures of a bull-baiting as if seen from above,—a reminiscence of the vessels of early Egyptian origin, in which the decorative figures on the inside were actual standing figures in the round. The curious return of the spirit and many of the features of this art in early mediaeval times is due to its survival in the obscure regions between orient and occident during the centuries in which the more classical Greek and Graeco-Roman art prevailed in the outer world, and to the movements of the great migrations which swept it again into Europe.

The Abbé Migne.—In *R. Arch.*, fifth series, I, 1915, pp. 203–258 (3 portraits), is an essay by F. DE MÉLY on the Abbé Jacques-Paul Migne (1800–1875), his life, his stupendous industry in the publication of his vast Patrologies, and the contents of his publications.

The Tsong Tablet of the Tcheou-Li.—In *R. Arch.*, fifth series, II, 1915, pp.

126-154 (5 figs.), G. GIESELER discusses the Tsong tablet of the Tcheou-Li. The form of such tablets (of jade) was that of a cylinder to which four prisms were added in such a way as to produce a cippus of almost square section. The whole symbolizes the earth, and the decoration symbolizes the heavenly bodies and the seasons. The development of the form and decoration is traced in some detail.

EGYPT

The Egyptian Word for "Dragoman."—In *S. Bibl. Arch.* XXXVII, 1915, pp. 117-125 (pl.), A. H. GARDNER argues that the rare Egyptian sign which has been variously interpreted as a jar with ears, or as a wallet tied with a string, is to be read phonetically, and is the Egyptian name for "dragoman." This official played an important part in all periods of Egyptian history.

Amentet.—Under the title *Amentet*, ALFRED E. KNIGHT has published brief descriptions of no less than 107 Egyptian divinities, with illustrations of them where they exist. He includes in the work a list of sacred animals, amulet representations of the human figure, and other amulets; also scarabs, and a list of all the royal scarabs. The material is arranged alphabetically wherever that is possible. [*Amentet. The Gods, Amulets and Scarabs of the Ancient Egyptians.* By ALFRED E. KNIGHT. London, 1915, Longmans, Green and Co. 274 pp.; 5 pls.; 189 figs. 8vo. \$4 net.]

Fundamental Religious Conceptions of the Elephantine Text.—In *Z. Alttest. Wiss.* XXXV, 1915, pp. 110-115, E. KÖNIG shows that the word 'elāhān has regularly a plural meaning in these texts so that it implies polytheistic conceptions among the Jews of Elephantine. The names Yahu, 'Ashim-Bethel and 'Anath-Bethel cannot be regarded as the names of human beings, but are deities, and prove the worship of at least two goddesses alongside of Yahweh by these Egyptian Jews of the fourth century B.C.

Hebrew Words in Egyptian.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 208-214, E. NAVILLE shows that the word "Canaanite" in the meaning of "merchant" that is so frequent in the Old Testament is found also in Egyptian texts. Succoth, the first station of the Hebrews in the Exodus, appears in Egyptian as Theku, and it is written with the sign for a foreign name. This word is the same as the Berber word *Thukka*, "pasture." The name Aduma, which is also written Adima, is not the equivalent of Edom, as has always been supposed but is the equivalent of the Hebrew *Etham*.

An Aramaic Papyrus of the Ptolemaic Period.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 217-223 (pl.), A. COWLEY discusses an Aramaic papyrus lately presented to the Bodleian Library by Professor Sayce. It shows that there was an organized congregation of Jews either at Abydos (?), or at Tba, or both, in the third century B.C., if that is the date of the writing. The "judges" are probably officers of the state, not the Jewish elders, but it looks as though the "heads of the congregation" were recognized by them. The general sense of the document seems to be that the three litigants were concerned with the division of certain property, including a house at Tba. The most interesting fact is that part of the property consisted of a *Tôrā*. In the Elephantine papyri there is no *Tôrā*, no Israel, no Jacob, no Levite, and the priests are not sons of Aaron. By the third century the *Tôrā* had reached South Egypt, perhaps brought by colonists from Palestine.

Ancient Flutes from Egypt.—Some bronze and ivory fragments of flutes found at Meroe, the ancient capital of Nubia, and now exhibited in the Archaeological Museum of the University of Liverpool, are the occasion of a brief discussion of the construction of ancient flutes, by T. LEA SOUTHGATE, in *J. H. S.* XXXV, 1915, pp. 12–21 (fig.). These pieces are probably the remains of some elaborate instruments brought by a visiting musician from Greece to this city in its brilliant period, when Cambyses had made it the capital of his province of Egypt. They were made in jointed sections and had an inner tube of ivory with bore from $\frac{7}{16}$ to $\frac{10}{16}$ of an inch, and a tightly fitted bronze covering. The finger holes are some round, some oblong, and one comma-shaped—the last two being adapted to a varying of the tone by partial closing. They still have the revolving rings for temporarily closing the holes not needed in a particular scale, without using the fingers, and the small conical projections for turning these rings, which have given the name “*bombyx*,” silkworm, to this style of flute. The exact length and indeed the number of the instruments here represented is uncertain, as well as the method of blowing, but it is probable that the breath was reinforced by the use of reeds. That these may have been transverse flutes, played through a hole on the side like the modern instrument, is shown by the fragments now in the British Museum, of a flute with mouthpiece on the side, which were found by Sir Charles Newton in a grave at Halicarnassus at the time of the Crimean War.

A Coptic Papyrus.—In *’Αρχ. ’Εφ.* 1915, pp. 30 f. (pl.), A. CH. HATZES publishes a facsimile and transcription, without translation, of a sheet of a Coptic papyrus manuscript, written in Greek characters, found at Arsinoe (Fayûm), and now in the possession of the Archaeological Society at Athens.

BABYLONIA, ASSYRIA AND PERSIA

A Sumerian Epic.—In Volume X, Number 1 of the *Publications of the Babylonian Section* of the Museum of the University of Pennsylvania, Professor LANGDON publishes with transliteration and translation the large tablet in Philadelphia giving a Sumerian account of the Flood and the Fall of Man (see *A. J. A.* XIX, 1915, pp. 182–183). He discusses the various creation legends, the Eridu version of the Fall of Man, the Nippur version, the Babylonian tradition of the prediluvian period, and the meaning of Tagtug. He also publishes twenty-one lines of a tablet containing a legend about Zi-ud-sud-du, the hero of the Flood. [*Sumerian Epic of Paradise, the Flood and the Fall of Man.* By STEPHEN LANGDON. Philadelphia, 1915, University Museum. 98 pp.; 6 pls. 4to.]

The Garden of Eden and the Fall of Man According to the Sumerians.—In *Exp. Times*, XXVII, 1915, pp. 88–90, A. H. SAYCE states that the fragment of the tablet first copied referred to the land being covered by water as well as to a boat. It was, therefore, natural that we should have thought we had a Sumerian version of the Deluge before us. Now that the whole tablet has been substantially recovered, it is evident that it contains nothing of the sort. Along with the Deluge must go the explanation of the name of the hero as the equivalent of the Semitic Noah.

The Niffer Story of the Creation and the Flood.—In *Exp. Times*, XXVI, 1915, pp. 490–494, T. G. PINCHES discusses an account of the Creation and the

Flood, current about 2000 years B.C. at the Babylonian city of Niffer, published by A. Poebel in the University of Pennsylvania *Museum Journal*. Mutilated though it is, this text is a document of considerable importance. There is still enough certain in the record to make possible a comparison with the other known Babylonian versions of the Creation and the Flood. In the eleventh tablet of the Gilgames series the great mother-goddess, who laments over the destruction of mankind, whom she had created, is Mah, "the lady of the gods," Merodach's spouse, so that the two are in complete accord here. From the opening lines of the first column, however, it would seem as though the gods, at the time they, with the help of the goddess, created man and the "four-limbed beasts of the plain," had foreseen the advent of the Flood at a later date, and had provided for the revivification of the human race, by placing in the ground the thing rendered "root," which, later on, the Babylonian Noah, here called Zi-û-sudu, named "the seed of mankind."

The Babylonian and the Biblical Flood Story.—In *Exp. Times*, XXVI, 1915, pp. 421-424, A. H. SAYCE claims that a detailed comparison of the Biblical flood story with the version of the Babylonian story contained in the Epic of Gilgames shows that behind the Biblical account lie two Babylonian versions of the story. One of these, which has been translated into Hebrew, is the version which we have in the Epic of Gilgames. Another account in Babylonian cuneiform, which has also been translated, was written in Palestine, or at all events from the point of view of an inhabitant of Palestine.

Sumerian Documents to the Dynasty of Agade.—In Volume IX, Number 1 of the *Publications of the Babylonian Section* of the Museum of the University of Pennsylvania, Professor GEORGE A. BARTON has collected 132 tablets (including fragments) of Babylonian documents from the earliest times to the dynasty of Agade. All are transcribed in facsimile and photographs of the best preserved texts added. The writer transliterates and translates six tablets and gives a list of the proper names found in the whole series. [*Sumerian Business and Administrative Documents from the Earliest Times to the Dynasty of Agade*. By GEORGE A. BARTON. Philadelphia, 1915, University Museum. 33 pp.; 74 pls. 4to.]

Babylonian Letters of the Time of Hammurabi.—Professor ARTHUR UNGNAD has published, as Volume VII of the *Publications of the Babylonian Section* of the Museum of the University of Pennsylvania, 133 letters of the time of Hammurabi preserved in the Museum. Following the practice in the other volumes of the series he transcribes the tablets, adding photographic plates of those best preserved. Eight tablets are transliterated and translated, as is an inscribed cone of 81 lines written in the earlier part of the reign of Hammurabi—and now in the Museum. A list of the proper names is added. [*Babylonian Letters of the Hammurabi Period*. By ARTHUR UNGNAD. Philadelphia, 1915, University Museum. 50 pp.; 114 pls. 4to.]

The Son's Portion in the Oldest Laws Known.—In *Exp. Times*, XXVII, 1915, pp. 40-42, A. T. CLAY reports that a tablet recently secured for the Yale Babylonian collection proved to belong to a period earlier than that of Hammurabi, and to contain laws written in Sumerian. The first law on the reverse of the Sumerian tablet reads: "If (a man) push a daughter of a man, and make let fall the possession of her interior, he shall pay ten shekels of silver." The second reads: "If (a man) strike the daughter of a man, and make let fall

the possession of her interior, he shall pay one-third of a mina of silver (twenty shekels).” These two laws are condensed into one in the Hammurabi Code. The third law covers the loss of a hired ship through carelessness. The fourth legislates with reference to a son who renounces his sonship, and receives his portion. The fifth refers to the repudiation of a child, doubtless one who was incorrigible. The sixth covers the case of elopement; the seventh, the enticing away, or the abduction of a girl, after her parents had refused to give her in wedlock. The eighth deals with the killing of a hired ox by a wild beast; and the ninth, the loss of a hired animal through neglect.

The Deification of Kings, and Ancestor-Worship, in Babylonia.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 87–95, 126–134 (4 pls.), T. G. PINCHES claims that certain inscriptions seem to show that ancestor-worship existed at least in the case of the kings of Babylonia. The possibility that the offerings recorded were really made on behalf of, and not to, Sur-Engur, Dungi, and the other personages, seems to be negatived by the fact that they all appear on the same plane, and in the same position, as Agar, the god of the place. Moreover, some of them were made to the seats or thrones of these rulers, as well as to the chariot mentioned in the passages where the lunar festivals are referred to; and it is to be noted that offerings to these objects are much more probable than offerings on their behalf. Though nothing is said in these inscriptions about the persons to whom the offerings were made being dead, there is no doubt that this was the case, as the remoter ancestors of the great Dynasty of Ur must long since have passed away. For the believers, however, they were as much living beings as the deity in whose temple divine honours were paid to them.

Babylonian and Assyrian Sculpture.—A brief and well illustrated account of Middle and New Babylonian and Assyrian sculpture is an important addition to the series of small handbooks issued under the name of *Der alte Orient*. The facts are stated without more discussion than seems unavoidable, but with sufficient detail to render the account intelligible and connected. [*Grundzüge der mittel- und neubabylonischen Plastik*, von Dr. BRUNO MEISSNER. Leipzig, 1915, Hinrichs'sche Buchhandlung. 156 pp.; 144 figs. 8vo. *Der alte Orient*, 15. Jahrgang, Heft 3/4.]

The Lion-Headed God of the Mithraic Mysteries.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 151–162 (2 pls.), F. LEGGE maintains that the conclusions which seem to follow from the new as well as from the old discoveries are that the lion-headed figure found in the Mithraic chapels does not represent the Supreme Being Zervan Akerana, or Boundless Time, but Ahriman, the God of Darkness; that in Mithraism Ahriman was not originally, nor perhaps ever, looked upon as an exclusively evil being; that it was only in the later stages of the worship of Mithra, that the figure of Ahriman was purposely made hideous and concealed from the sight of the inferior initiates.

SYRIA AND PALESTINE

A Group of Hebrew Names of the Ninth Century B.C.—In *Exp. Times*, XXVII, 1915, pp. 57–62, G. B. GRAY discusses the Hebrew proper names found on the ostraca discovered at Samaria in the years 1908–1910 by the expedition of Harvard University. Although Ahab's name has not been

found, the names of more than thirty individuals, who were probably his contemporaries, occur in the inscriptions. The first group of Old Testament names consists of pre-Davidic names, the second of contemporaries of David, the third of contemporaries of Jeremiah. The chronological gap between the second and third of these groups is supplied by the ostraca from Samaria. The group as a whole resembles the group of names of David's contemporaries in 2 Sam. 9-20. The compounds with *Yah*, here both at the beginning and end of words written *Yo*, are clear. The ostraca show two (or including Abiezer, three) compounds with 'Ab, two with 'Ah, and one with 'Am out of a total of 37 (or 32). Two compounds with *El* at least, four probably at most, occur in the 37 (or 32) names of the ostraca. The presence of *Ba'al* names in the ostraca was due to the continuous operation of causes that created a similar group of names in the Davidic period.

Recent Archaeology and the Old Testament.—In *Bibl. World*, XLV, 1915, pp. 10-16, 135-145, 202-210, 288-298, 353-361; XLVI, 1916, pp. 25-32, 82-89, 173-180, L. B. PATON discusses the bearing of recent archaeological discoveries on the Pentateuchal history under the following heads: (1) The Creation, (2) The Origin of Man, (3) The Flood, (4) The Origin of Races, (5) The Sumerians (5000-3500 B.C.), (6) The Primitive Semites (5000-3500 B.C.), (7) The Akkadian Period (3500-2500 B.C.), (8) The Amorite Period (2500-1580 B.C.), (9) The Historical Character of Abraham, (10) Isaac, Jacob, Esau, and the Sons of Jacob, (11) The Egyptian Period (1580-1187 B.C.), (12) The Conquest of Canaan. In *Pilgrim Teacher*, 1915, pp. 77-79 (4 figs.), 162-165 (3 figs.), 235-238 (3 figs.), 293-295 (2 figs.), 385-388 (4 figs.), 447-450 (4 figs.), 520-522 (fig.), 601-603 (3 figs.), 819-822 (3 figs.), he discusses the bearing of archaeology on the later books of the Old Testament under the following heads: (1) Canaan Before the Hebrew Conquest, (2) The Religion of the Canaanites, (3) Remains of the Early Hebrew Period, (4) Jerusalem in the Time of David, (5) The Earliest Hebrew Inscriptions, (6) Jerusalem in the Time of Solomon, (7) Archaeological Remains of the Period 960-843 B.C., (8) Assyrian Information in Regard to the Times of Elijah and Elisha (854-806 B.C.), (9) The Fall of the Kingdom of Israel.

Samaritan Phylacteries and Amulets.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 96-107, 135-144, 163-174, M. GASTER describes sixteen phylacteries. Fourteen are originals, and two are photographic facsimiles of originals. Of these texts eight belong to the first group. These phylacteries (or Shem), with one exception which is written on paper, consist of one goat skin cut into a square measuring from top to bottom between 17 inches and 22 inches. All these texts are anonymous. Neither the name of the writer, nor that of him for whose benefit the amulet was written, is mentioned. It can be worn by anyone who happens to possess it or to whom it may have been lent for the purpose of averting evil or healing the sickness from which he suffers. The second group consists of scrolls. The text is not written on a square piece, but in one long column.

The Lord of Hosts.—In *Exp. Times*, XXVI, 1915, pp. 457-461, M. GASTER maintains that, whatever the original meaning of the expression "Lord of Hosts" may have been, it was lost when applied to God, when it became a stereotyped name; and just as little as one would think of translating *Yahweh Elohim* "the Lord of Gods," so little can we translate *Yahweh Sabaoth* "The

Lord of Hosts." It must be either "The Lord, (The) Host(s)," if it is to be translated at all, or the "Lord who is Sabaoth," or rather, following the unbroken tradition of the ages and the old versions—"The Lord Sabaoth."

The Origin of the Races.—In *Exp. Times*, XXVI, 1915, pp. 558-560 and XXVII, 1915, pp. 136-138, A. H. SAYCE discusses the list of the nations in Genesis IX and X in the light of the most recent archaeological discoveries.

The Princeton Expedition to Syria.—In *Ancient Architecture in Syria*, Section A, Part 5, Professor HOWARD CROSBY BUTLER continues the publication of the results obtained in the field of architecture by the Princeton expeditions to Syria by describing the remains in the Haurân plain and Djebel Haurân. Plans and descriptions of buildings on twenty-seven different sites in these districts are given, as well as reproductions of architectural details, etc. In Division III, Section A, Part 5, Professors ENNO LITTMANN, DAVID MAGIE, JR., and DUANE REED STUART publish 178 inscriptions, two Latin and the rest Greek, from the same region. [*Publications of the Princeton University Archaeological Expeditions to Syria in 1904-1905 and 1909*. Division II, *Ancient Architecture in Syria*. By HOWARD CROSBY BUTLER. Section A, Southern Syria, Part 5, Haurân Plain and Djebel Haurân. Leyden, 1915, Late E. J. Brill. Pp. 297-363; pls. 19-27; figs. 268-322. Division III, *Greek and Latin Inscriptions in Syria*. By ENNO LITTMANN, DAVID MAGIE, JR. and DUANE REED STUART. Pp. 271-358.]

A Coin of Tyre, not Heliopolis.—In an article on the history of the Syrian Heliopolis (*Rhein. Mus.* LXIX, 1914, p. 157), H. WINNEFELD described a coin (of the Löbbecke collection, now in the Berlin Cabinet) with the bust of Salonina on the obverse, and on the reverse a round or polygonal building adorned with columns and rich plastic ornament. This building he was led to ascribe to Baalbek by the reading by Löbbecke of the much worn inscription on the reverse. No other similar type was known. Another coin (of Gallienus) bearing it has now come into the Berlin Cabinet from the collection of Th. Prowe in Moscow. On this coin the inscription COL TVR is legible, and a cuttlefish is plainly depicted in the field. The inscription on the other coin can now be read with the help of this, and even traces of the cuttlefish detected. Both coins are plainly of Tyre. The building represented was perhaps some temporary structure erected for a special purpose. (*Z. Num.* XXXII, 1915, pp. 152-153; 2 figs.).

Coins of Nero from Syria.—A group of Greek silver coins of Nero ascribed by Vaillant and others to Ephesus is credited by KURT REGLING to Syria on the ground of comparison in style and forms of letters with the silver eagle-tetradrachms of Nero. (*Z. Num.* XXXII, 1915, pp. 146-151; cuts.)

ASIA MINOR

The Twelve Gods in Lycia.—The δώδεκα θεοί, appearing upon a number of Lycian reliefs, have been made the subject of a memoir by O. Weinreich which is summarized and criticized by A. REINACH in *R. Ép.* II, 1914, pp. 316-319.

GREECE

SCULPTURE

A Minoan Bronze at Leyden.—The bronze statuette of a standing male figure (Fig. 1), which was found in the neighborhood of Phaestus, Crete, and has been acquired by the Royal Museum of Antiquities at Leyden, is published by G. VAN HOORN in *J. H.S.* XXXV, 1915, pp. 65–73 (pl.; 7 figs.). The hands and the legs below the knees are missing, and the forearms, which are raised in front of the breast bringing the wrists close to the mouth, have probably been bent in from some less constrained position. The present height is 14 cm. This is apparently an example in the round of the vase-bearer, already known in fresco and relief, and it has the familiar broad shoulders, narrow waist and sharp backward bend of the body, which characterize the Minoan figures. The costume consists of a round flat hat worn on the back of the head,



FIGURE 1.—MINOAN BRONZE
STATUETTE

and a variety of the apron-tunic with thickly rolled girdle. The front lappet of the tunic is doubled over so that both edges lie toward the right and the long tapering back part is cut in a shape resembling the tail of a modern dress coat. It may well represent a leather garment.

Calamis.—In *Jb. Arch.* I. XXX, 1915, pp. 74–95 (14 figs.), J. SIX, beginning with the bronze charioteer of Delphi, discusses the style, connections, works and influence of the sculptor Calamis. The predecessor of Polygnotus and Phidias and primarily an artist in bronze, perhaps of Boeotian birth, working in the years *ca.* 490–450, an innovator for his time, he strove to express moments of exaltation, an inner tension of feeling, with forms rather

superficial than based consciously on the skeleton. The charioteer, to be dated *ca.* 474, in his expression, in the attitude, resting firmly on both feet, the columnar, fluted drapery, and the degree of naturalism in the folds above the girdle, shows the characteristics by which other works may be assigned to Calamis or his circle. Such are the Hestia; the Herculeanum Dancers; the Ludovisi-Boston triple reliefs from an altar of Aphrodite; the Ludovisi colossal head of a goddess from an acrolithic statue, which appears to belong with this altar; the Hermes Criophorus of the Barracco collection; the Aphrodite of Callias (*ca.* 450); the Nike Apteros of the Acropolis (Sosandra); the Mourning Athena of the Acropolis; and especially the mourning figure known as Penelope, in which there is, perhaps, hidden an *ἀλγουμενή*, the origin of the not very plausible reading “Alcumena” for Alcmene, in Pliny *N. H.* XXXIV, 71. This work seems to justify the comparison of Calamis with the orator Lysias, made by Dionysius of Halicarnassus (*De Isocr.* III, 522).

Pythagoras and the Charioteer at Delphi.—In *Ausonia*, VIII, 1913 (pub-

lished 1915), pp. 35-43 (7 figs.), F. VON DUHN points out that the terra-cottas found in such large numbers at Locri Epizephyrii and elsewhere in southern Italy reveal a local art which has affinities with Ionic art. Pythagoras, famous for his sculpture in bronze, was a native of Rhegium and a pupil of Clearchus, also a native of that town. The head of a terra-cotta figurine of this school in the museum at Reggio bears a striking resemblance to the head of the charioteer at Delphi, which, he thinks, may be safely claimed as an original work of Pythagoras. The group was probably ordered by Anaxilas (the last part of whose name he thinks may be made out in the erased inscription), and after his death dedicated by Polyzelus. It was probably thrown down and buried before the time of Pausanias.

The Bronze Dancers of Herculaneum.—In *Ausonia*, VIII, 1913 (published 1915), pp. 179-190 (6 figs.), L. SAVIGNONI argues that the six bronze statues of women from Herculaneum and now in the Naples museum fall into two groups. The woman fastening her chiton and the little figure are copies of statues dedicated in some temple; the four others are represented as taking part in a choral dance in honor of some divinity. The original group probably consisted of more than four figures.

The Athena and Marsyas of Myron.—In *Jb. Kl. Alt.* XXXV, 1915, pp. 8-15 (7 figs.), P. J. MEIER answers criticisms of his restoration of Myron's group of Athena and Marsyas. A new examination of the Athena in Frankfurt proves that the right hand and arm of that statue belong together, and that Dragen-dorff's scepticism was not justified. Sieveking's restoration of the Athena with a flute in each hand is unsatisfactory. Meier examines in some detail Bulle's restoration and objects particularly to the position which he gives to Athena's lance. He thinks his own restoration on the whole the most satisfactory.

Atalanta.—In *Ausonia*, VIII, 1913 (published 1915), pp. 1-6 (fig.), A. DELLA SETA argues that the statue in the Vatican of a young girl in a very short chiton apparently in the act of stopping in the midst of a race represents Atalanta. He thinks that it is either a youthful work of Myron, or by one of his immediate predecessors.

Polygnotus and the Parthenon Pediments.—In *Jb. Arch.* I. XXX, 1915, pp. 95-126 (pls.; 13 figs.), B. SCHROEDER publishes a study of draperies, especially the chiton, in the fifth century sculptures that are associated with the Parthenon, with reference to the technique in which the various styles of treatment originated, whether in bronze, marble, soft modelling, or drawing and painting. Viewed largely by this test, the sculptures of the temple itself fall into five groups, the north metopes, the south metopes, the east and west metopes, the frieze, and the pediments, which, perhaps, correspond to an assignment of the different parts of this great work to the different studios or schools of sculpture then existing at Athens. Each division would thus show the work of various hands under one direction, and have a certain unity and treatment of its own, as appears to be the case. The pediments were undoubtedly executed under the influence, either direct or indirect, of Polygnotus, and the artificial perfection of the draperies is in a style originating in painting on a grand scale. Various indications point to Thasos as the home of a school of sculpture of this sort. A female head, of Thasian marble, in Berlin, gives a suggestion of what the missing pediment heads may have been. A male torso of Dionysus from Asia Minor, also in Berlin, wears a short, clinging chiton, and is to be classed here.

A Lysippian Eros from Myndus.—The notice in Cedrenus of the famous statues in the Lauseion at Constantinople in the fifth century A.D. is a mixture of truth and nonsense which can to some extent be distinguished. A slight emendation, the transfer of a few words to another part of a sentence, removes an obvious blunder and gives us as a work of Lysippus, the winged Eros with bow brought from Myndus in Caria, "Ἐρως τόξον ἔχων πτερωτός Μυνδόθεν ἀφικόμενος. The Eros drawing a bow, which exists in some thirty replicas and is of the time of Lysippus, is usually identified with his Eros seen by Pausanias (IX, 27, 3) at Thespieae; but as nothing is known of the composition of that work, while the statue from Myndus had the bow, an attribute rare in the fourth century, it is at least possible that the latter is the original of this evidently famous type. It may serve with the Apoxyomenus of the



FIGURE 2.—SATYR AND DIONYSUS; FRAGMENTARY GROUP

Vatican as basis for the study of the later art of Lysippus. (A. FRICKENHAUS, *Jb. Arch. I.* XXX, 1915, pp. 127-129.)

Large Bronze Statues.—In *R. Arch.*, fifth series, II, 1915, pp. 97-113, A. DE RIDDER tries to estimate the cost of large bronze statues in antiquity from literary sources and inscriptions. In the fourth century B.C. an iconic statue cost, according to the Cynic Diogenes (Frag. 105, Mullach; Diog. Laert. VI, 35), 30 minae, and this agrees with the prices given in two inscriptions (*I.G.* II, p. 251, *Class. Rev.* VII, 1894, p. 217). The cost of the metal used, of the preparation and the labor, is estimated. The Colossus of Rhodes, 72 ell in height, is said by Pliny (XXXIV, 41) to have cost 300 talents. The data give little information concerning the part of the expense which made the profit of the artist.

The Colossal Statue from Cyrene.—In *C. R. Acad. Insc.* 1915, p. 151, S. REINACH points out that the colossal statue recently found by the Italians at Cyrene does not represent Alexander, but a Dioscurus in the guise of an Alexander. It dates from the time of the Antonines, and has nothing to do with Lysippus.

The Faulty Colossus.—The passage in *Περὶ Τύχης* 36, ὁ κολοσσὸς δὲ ἡμαρτημένος οὐ κρείττων ἢ ὁ Πολυκλείτου δορυφόρος, contains some error. The reference cannot be to the Zeus of Phidias, but must be to the Colossus of Rhodes. (PAUL WOLTERS, 'Archäologische Bemerkungen. II,' *Sitzb. Mün. Akad.* 1915, iii, pp. 1-10.)

A Satyr and Dionysus.—In *Ausonia*, VIII, 1913 (published in 1915), pp. 90-103 (pl.; 7 figs.), A. MINTO publishes the fragment of a group representing a youthful satyr with the boy Dionysus on his shoulders (Fig. 2) recently acquired by the Archaeological Museum in Florence. It once belonged to the Strozzi collection. The head and chest of the satyr and the torso of the Dionysus are alone preserved. Four other copies of the group are known. It dates from early Hellenistic times.

A Nereid from Ostia.—In *Ausonia*, VIII, 1913 (published 1915), pp. 191-200 (6 figs.), G. Q. GIGLIONI discusses the torso of a Nereid found at Ostia in 1913 (*Not. Scav.* 1913, p. 312). He connects it with the Borghese Amazon, the Maenad in Dresden, and the small group to which they belong, and argues that it is a Hellenistic work inspired by Scopas.

The Venus of the Ariana Collection.—In *R. Arch.*, fifth series, I, 1915, p. 336 (2 figs.), S. REINACH publishes two views of the head in the Ariana collection at Geneva, which is one of the very few replicas of the head of the Venus de Medici. The bronze in Munich is now regarded as modern. The head in the Ariana collection is of fine artistic quality, but doubt is expressed concerning its antiquity.

VASES AND PAINTING

Euphronius and his Colleagues.—A summing up and solution of the question, now more than twenty years old, of the career of Euphronius, the vase painter and potter, with his signatures *ἐγραψεν* and *ἐποίησεν*, are presented by E. RADFORD in *J. H.S.* XXXV, 1915, pp. 107-139 (pl.; 8 figs.). It appears that he began in the early years of the fifth century, 500-480 B.C., by painting vases for other potters, Chachrylion, Sosias, Euthymides, and although somewhat influenced at first by the last named, he displayed at once the originality, imagination, power of draughtsmanship and surety of pose which made him eventually the greatest of the Greek vase painters. Later when he established his own atelier, other men more or less under his influence painted his vases, and five different hands, some known by name, some only by their style, can be identified. One of the *ἐγραψεν* vases, the psykter at Petrograd, has four beautiful nude female figures, a feature very uncommon at this period, and one of these apparently served as model for the nude hetaera of the Ludovisi throne, the only known instance of the nude female figure in classical sculpture before the fourth century. The artists of the *ἐποίησεν* group included a master of great force and originality who also painted cups for the potter Brygus. Onesimus was one of the weakest of them. The whole period covered by the work of Euphronius is fairly accurately fixed at about forty

years, by the names of favorites employed—Leagrus, Panaitius, Lycus and Glaucon—of whom Leagrus was probably the strategus of that name who was killed in 467, and Glaucon, his son, commander in 433. The career of Euphronius falls entirely within the red-figure period, possibly with a polychrome or white-ground venture at the end.

Scythes and Epilycus.—A brief discussion by E. BUSCHOR of the group of vases bearing the name of Scythes as painter and the *καλός* name of Epilycus, is given in *Jb. Arch. I.* XXX, 1915, pp. 36–40 (2 figs.). He maintains that the few cases in which the relation has been supposed to be reversed, Epilycus

being the potter and Scythes the one honored, are in reality similar to the others, the fragmentary inscriptions being capable of the usual arrangement and interpretation.

The Chigi Vase.—In *Ausonia*, VIII, 1913 (published 1915), pp. 104–144 (4 pls.; 3 figs.), G. CULTRETTA discusses the so-called “Chigi vase” (Fig. 3) found at Monte Acuto and now in the Museo di Villa Giulia. It is an oenochoe, 28.5 cm. high, with three bands of painted decoration. In the middle zone, beneath the handle, is the judgment of Paris (with inscriptions); to the right of this are horsemen and a chariot, and to the left a lion hunt. Between these two scenes are sphinxes. In the zone above is a combat, and in the zone below running animals.



FIGURE 3.—THE CHIGI VASE

The writer believes the vase to be the product of Ionic and proto-Attic art, and to date from the first part of the sixth century B.C.

The Athenian Necropolis.—In *Berl. Phil. W.* November 6, 1915, cols. 1422–1424, P. WOLTERS calls attention to the fact that the vase fragments upon which he identified a picture of the Athenian necropolis (see *Sitz. Mün. Akad.* 1913, v.; *A.J.A.* 1914, p. 229) are now in the collection of Paul Arndt. They probably once formed part of a *loutrophoros*. The inscription on the third stele is to be read *ἐξς ἐλευθερίαν*.

Peleus on Pelion.—In *Sitzb. Mün. Akad.* 1915, iii ('Archäologische Bemer

kungen, II'), pp. 10-20, PAUL WOLTERS discusses the scene represented on an Attic black-figured amphora with cover found in a tomb at Lacetina, west of Ischia di Castro (see *Not. Scav.* 1913, pp. 363 ff.). He explains it as Peleus whom Acastus wished to destroy on Mount Pelion. The same myth appears on a vase in the possession of Mrs. Mond (*Burlington Fine Arts Club, Exhibition of Ancient Greek Art*, 1904, pl. 98, p. 115, No. 62). The variants of the myth are discussed.

Painted Reliefs.—In *R. Ép.* II, 1914, pp. 248-266, A. REINACH discusses the encaustic painting of ancient reliefs, both in the Greek world and in the West, partly from the evidence of existing traces of color and partly from literary and epigraphical data. A marble plaque from Thasos with a relief of Cybele and other divinities is here published for the first time.

INSCRIPTIONS

The Linear Script of Crete.—A catalogue of the signs of the A and B systems of Cretan linear writing, with a brief discussion and a comparison with the Cypriote syllabary, is published by J. SUNDWALL in *Jb. Arch. I.* XXX, 1915, pp. 41-64. He enumerates 77 signs of the A script and 60 of B, of which some 45 are common to both. Many of the signs of A, both of those peculiar to A and those common to A and B, are identical with signs in the earlier hieroglyphic-pictographic system of writing. He finds that the B system is a local Cnossian modification of the A system, made in the interest of clearness and method, at the time of the building of the later palace at Cnossus, and may indicate a dynastic influence. The Cypriote writing is also derived from A, and this indicates that the signs of A are also syllabic. The brief inscriptions on the containers of imported wares at Tiryns are likewise from Crete and represent some form of the A system.

Notes on the Lycian Alphabet.—In *J.H.S.* XXXV, 1915, pp. 100-106, W. ARKWRIGHT presents some notes on the value of certain Lycian characters and on the relation between the dialects known as Lycian I and Lycian II. He now believes that the sign x represents a sibilant, best rendered in Greek by ζ , and that the sound of θ did not occur in genuine Lycian words or names. The interchange of b and m seems proved. The s of Lycian II probably represents an older form than the corresponding h of Lycian I, in the genitive ending, etc.; hence the Greek place-names like *Τελεμειός* and *Τυβερεισός*, representing native *telebehi* and *tuminehi*, and eventually superseding them, were derived from the earlier forms with s .

Argive Inscriptions.—In *Mnemosyne*, XLII, 1914, pp. 330-353; XLIII, 1915, pp. 365-384; XLIV, 1916, pp. 46-71, W. VOLLGRAFF discusses various Argive inscriptions.

Greek Literature in Inscriptions.—In *Classical Weekly*, November 13, 1915, pp. 41-44, K. K. SMITH collects the quotations from Greek literature in inscriptions discovered in recent years. They are: *Iliad*, II, 204-205, II, 412, V, 31, XV, 187-191, XV, 187-193; *Odyssey*, IX, 528; Euripides, *Phoenissae*, 107-118, 128-139, and an adaptation of ll. 3 ff.; a line of the epitaph of the Athenians who died at Marathon by Simonides, quoted by Demosthenes (*de Corona*, 289); two words of the oracle in Lucian, *Alex.* 36; parts of fifty-six lines of maxims of Sosiades quoted in part by Stobaeus; the great inscription of Lindus by Timachidas with references to twenty-three authors; an

epigram of the rhetorician Aristides; and two epigrams of Antiphon, a poet of the new comedy.

A Decree of the Thiasus of Bendis.—In *Ἀρχ. Ἐφ.* 1915, pp. 1-4 (fig.), S. N. DRAGOMES publishes a perfectly preserved inscription of 276-5 B.C. found near the site of the sanctuary of Artemis, close to the ancient city of Salamis, and recording a decree of the Association of Bendis in honor of its officers. By the help of this decree several improvements are suggested in the readings proposed for *I. G. II*, 620, a decree of the same association, found in the same place by Fourmont, and later reviewed by Wilhelm, *Jh. Oest. Arch. I.* 1902. Though separated by about thirty years, the two executive boards have two, perhaps three, members in common.

Thessalian Inscriptions.—In *Ἀρχ. Ἐφ.* 1915, pp. 8-27 (22 figs.), A. S. ARVANITOPOULLOS continues his publication of Thessalian inscriptions (cf. *ibid.* 1914, pp. 167-184, etc.), with twenty-eight more inscriptions from Gonnus and Gonnokondylos. These include awards of *proxenia*, certification of boundaries (?), manumission, votive inscriptions, and epitaphs, one of the latter recording the exploits of a certain Damocrates in the service of his country. Omega in the form Ω is found as early as 200 B.C. *Ibid.*, pp. 28-30, the same author publishes an index showing the catalogue numbers of the inscriptions in the museum of Gonnus and the place of publication of each. In *R. Ἐπ.* II, 1914, pp. 221-236, he publishes sixteen inscriptions from Azorus and Doliche, of which the five longest are records of manumissions and the others chiefly sepulchral. In *Ἀρχ. Ἐφ.* 1915, pp. 74-78 (2 figs.), N. I. GIANNOPOULOS publishes ten inscriptions of Thessaly, including an honorific inscription of the third century B.C., several grave stelae, and a rock-cut inscription of the acropolis of Pharsalus that he does not attempt to transliterate or restore. He also publishes, *ibid.*, p. 78 (fig.), a photograph of the votive inscriptions to Ζεὺς Θαύλιος and Ζεὺς Ἀφρῖος which he published *ibid.* 1913, pp. 218, 1 and 219, 4.

Christian Inscriptions of Thessaly.—In *Ἀρχ. Ἐφ.* 1915, pp. 80-82 (8 figs.), N. I. GIANNOPOULOS publishes seven epitaphs from vaulted Christian tombs and a marker for a harbor mooring at New Anchialus, and also an epitaph from Thebes in Phthiotis bearing the name Πρωβάτιος, formed from πρόβατα in its New Testament sense.

Boeotian Farmers.—In *R. Ἐτ. Gr.* XXVIII, 1915, pp. 51-54, S. LOURIA undertakes to clear up certain difficulties in an inscription relating to Boeotian farmers, published in *B.C.H.* XXI, p. 553, No. 2.

The Offering to the Eleusinian Goddesses.—In *Berl. Phil. W.* September 25, 1915, cols. 1230-1232, W. BANNIER discusses the Athenian decree relating to the offering of grain to the Eleusinian goddesses (*I.G. II*, 140, ed. min.).

A Bacchic Society.—An inscribed basis of late Roman date, found in the city of Malko-Tirnovó, in the Bulgarian territory of Burgas, is dedicated to Dionysus, θεῶ Διὶ Διονύσω, by the priest of an association of worshippers of the god, a Βακχεῖον. The double name is to be compared with Ζεὺς Βάκχος and Ζεὺς Σαβάκιος. (G. KAZOROW, *Arch. Anz.* 1915, cols. 87-89; fig.).

Inscriptions from Sardis.—In *R. Ἐπ.* II, 1914, pp. 319-322, A. REINACH gives a résumé and criticism of Buckler and Robinson's discussion (*A.J.A.* XVII, pp. 353 ff) of the *Kaueis* inscriptions found at Sardis.

A Grave Inscription from Egyptian Thebes.—In *R. Ἐτ. Gr.* XXVIII, 1915,

pp. 55-57, T. REINACH publishes a Greek grave inscription of the time of Hadrian from Egyptian Thebes. Eleven lines in elegiac verse are preserved.

Epigraphical Notes.—In 'Αρχ. 'Εφ. 1915, pp. 5-8, S. N. DRAGOMES gives reasons for believing that the list of Athenian archons of 57-6 B.C. which he published *ibid.* 1905, pp. 181-186, the one found by Kastrites on the site of the Odeum, *ibid.* 1914, pp. 165 f., and other lists of this kind are, like the Attic inscriptions of Delphi, published by Colin, *B.C.H.* XXX, Nos. 57-61, records of the annual sacred embassy to Delphi, conducted by the nine archons, the Athenian lists having been set up in the Pythium. In 'Αρχ. 'Εφ. 1915, pp. 32 f. and 33f., A. CH. HATZES publishes corrections to eight inscriptions published *ibid.* 1914, *passim*, and four miscellaneous epigraphical notes.

Corrections.—In 'Αρχ. 'Εφ. 1915, p. 94, E. N. PETROULAKIS publishes several corrections to his articles on inscriptions of Genna and of Eleutherna (Crete), *ibid.* 1914, pp. 222-229.

COINS

Coinage of Croton.—Barelay V. Head, describing in his *Historia Numorum* a certain class of silver staters belonging to the years 330-299 B.C., was of the opinion that no legal reduction of weight took place at Croton as it did about 281 B.C. at other cities of Magna Graecia, and that no staters were struck at Croton after 299. S. W. GROSE now publishes (*Num. Chron.* 1915, pp. 179-191; pl.) a number of late Crotonian coins of an obverse type (eagle with head turned back, standing on a thunderbolt) not noted by Head; and by statistics of weight also shows reason for revising the earlier conclusions. He also describes a few other coins of Magna Graecia and Sicily which lead toward interesting inferences.

Coinage of Cyrene.—In *Num. Chron.* 1915, pp. 137-178, E. S. G. ROBINSON continues his detailed investigation of the coinage of the Cyrenaica, treating here of the gold issues with the small class of accompanying silver, the silver coinage of Attic weight, and the later issues of Barce and of Euesperides.

An Unedited Gold Stater of Lampsacus.—An unedited gold stater, briefly mentioned by AGNES BALDWIN in her article on the gold coinage of Lampsacus in the *Jour. Intern. de Num.*, 1902, p. 8, is now in the Löbbecke collection of the Berlin Cabinet, and is fully described by her in *Z. Num.* XXXII, 1915, pp. 1-14 (pl.). Contrary to the usually accepted dating for the series of gold staters to which this coin belongs, she would assign the series to the period 387-ca. 330 B.C.

GENERAL AND MISCELLANEOUS

The Labyrinth.—In *R. Arch.*, fifth series, II, 1915, pp. 114-125, Captain ROBERT DE LAUNAY, who was killed in battle, May 9, 1915, discusses the labyrinth. He finds that the circular walls uncovered at Tiryns (*Ath. Mitt.* XXXVII, 1913, pp. 78 ff.; *Arch. Anz.* 1913, pp. 110 ff.) are remains of a labyrinth; the foundations of the tholos at Epidaurus belong to the same category, as do also megalithic circles in various parts of the world. From the labyrinth the swastika, the cross, the circle with a cross or a line, or even a dot, inscribed, are derived. Originally the labyrinth had a religious significance, symbolizing the sun, or rather the sojourn of the sun in its winter prison, which brings it into connection with such myths as those of Heracles, Perseus, Siegfried and others.

On the Development of the Ancient Theatre.—At the January (1915) meeting of the Berlin Archaeological Society, opposing views on the Hellenistic "stage" and the Roman *scenae frons* were set forth by E. Fiechter and W. Doerpfeld in accord with the published work of both. Fiechter regards Vitruvius's treatise as a literary compilation, without technical authority. He considers the remains of third-century theatres with the related vase and wall paintings as best explained by supposing that, with the disappearance of the chorus from the drama, the actors were transferred from the orchestra in front of the proscenium to the narrow platform on top of it, and that this was enlarged by using with it a sort of portico behind the widely spaced pillars into which the scene-wall was here changed, this treatment of the upper part of the scene being the origin of the later *scenae frons*. The type of the Roman theatre building, first seen in Pompey's Theatre at Rome, built in 55 B.C. in modified imitation of the theatre at Mitylene, was a combination of the stage of Italian origin, and the orchestra and cavea, which were the essentials of the eastern theatre. Doerpfeld pointed out the errors of this theory, on technical grounds and those of common sense, reiterating his belief that the human action of the play always took place before the proscenium, which eventually developed into the Roman *scenae frons*, while the upper platform in the Hellenistic theatre was for the divine personages, the wide openings behind it being used when needed for the passage of winged chariots or other apparatus, but ordinarily closed by large wooden doors, for acoustic purposes. (*Arch. Anz.* 1915, cols. 93-105.)

The Madness of the Daughters of Proetus.—In *Ausonia*, VIII, 1913 (published 1915), pp. 145-178 (5 figs.), L. SAVIGNONI discusses the story of the madness of the daughters of Proetus told in the tenth ode of Bacchylides, and the representations of it in ancient art. He can enumerate only a Southern Italian vase in Naples dating from the fourth century B.C.; a cameo in the Bibliothèque Nationale in Paris; and a terra-cotta relief found at Medma and published in *Not. Scav.* 1913, p. 59, figs. 67 and 68.

The Seers of Olympia.—In *Arch. Rel.* XVIII, 1915, pp. 53-115, L. WENIGER discusses the seers of Olympia. A complete list of their names is preserved from the middle of the first century B.C. to 265 A.D.

A Note on the Eleusinian Mysteries.—In *Arch. Rel.* XVIII, 1915, pp. 116-126, A. KÖRTE argues that in the celebration of the Eleusinian mysteries an act was performed symbolizing the rebirth of the initiate.

Herondas and a Prayer for Health and Life.—In Herondas IV, 94, the word *ὑγίη* occurs in the sense of a sacred cake. In this connection P. PERDRIZET (*R. Ét. Gr.* XXVII, 1914, pp. 266-280) calls attention to two bronze stamps in the Bibliothèque Nationale and a third in the British Museum inscribed *ζοή ὑγία*. Furthermore inscriptions from Syria, dating from the fourth century A.D. and later, sometimes begin with the formula *ζοή ὑγία χαρά* or *ζοή ὑγία*. These wishes for life, health and happiness are oriental in origin and may be traced back to an early period.

Athena Aethyia.—In *Arch. Rel.* XVIII, 1915, pp. 127-133, A. KROCK argues that Athena Aethyia of Megara was Athena in the guise of a bird, *i.e.*, a theriomorphic form of the goddess, and that this was a stage in the development of the cult.

Notes on the Iphigenia Myth.—In *R. Ét. Gr.* XXVIII, 1915, pp. 1-15, S.

REINACH argues that Iphigenia was an epithet attached to different animals in different places. At Aulis Iphigenia was a sacred doe; among the Taurians she was a heifer and divinity combined. It was only in later times that she became the priestess of Artemis.

Rhesus of Thrace.—Rhesus of Thrace, who appears momentarily with his white horses in the Doloneia (*Il. X*, 435), was not a genuine hero of Greek myth or a decayed tribal god, as Rohde has tried to make out; on the contrary his parentage and career were an invention of Euripides, who wrote the play of Rhesus to give a religious sanction to the Amphipolis expedition of the year 437. This is shown, partly on the authority of Cicero, by W. LEAF, *J.H.S.* XXXV, 1915, pp. 1–11.

Two Terra-cotta Lamps from Thessaly.—In *Ἀρχ. Ἐφ.* 1915, pp. 72–74 (4 figs.), N. I. GIANNOPOULOS publishes two terra-cotta lamps of the fourth or third century B.C., decorated with heads of Medusa, one of them very fine. Medusa is represented with abundant wavy locks and a necklace, which suggest her snakes, and two small wings on the top of her head. These heads help to identify heads upon the coins of Larissa and Pherae as heads of Medusa, and not, as is usually supposed, of the nymph Larissa.

The Graeco-Egyptian Portraits.—In *R. Arch.*, fifth series, II, 1915, pp. 1–36 (13 figs.), the treatise on the Graeco-Egyptian portraits by A. REINACH (cf. *A.J.A.* XIX, 1915, p. 182) is continued. The author has been missing since August 30, 1914. The portraits were painted to be exposed in the house and were subsequently added to the sarcophagi. They date chiefly from the first and second centuries A.D. The persons represented are of both sexes, various ages, and many different nationalities.

Mines Operated by the Ancients in Macedonia and Epirus.—To prepare the way for the development of the mineral wealth of the lands recently added to the kingdom of Greece, A. S. GEORGIADIS publishes (*Ἀρχ. Ἐφ.* 1915, pp. 88–93), with a commentary, a compilation of the passages in the ancient authors referring to mines of silver, gold, etc., operated in Macedonia and Epirus. A similar chapter on the mines of the islands is to follow.

Demetrias-Pagasae.—In *Ἀρχ. Ἐφ.* 1915, pp. 83 f., N. I. GIANNOPOULOS continues his Demetrias-Pagasae controversy with Arvanitopoulos (cf. *ibid.* 1914, pp. 90–92 and 264–272).

Supplementary Notes.—Apropos of *B.S.A.* XVI, 1909–1910, p. 249 (on modern survivals of the Dionysia in Northern Greece and Macedonia, by Wace), N. I. GIANNOPOULOS explains the word *κουρεμαδιά* as a disparaging term for “wife,” and apropos of *Ἀρχ. Ἐφ.* 1914, pp. 70–84 and 260–263 (on a Christian table top, by Xyngopoulos), he cites other representations of animals in Christian art in Thessaly (*Ἀρχ. Ἐφ.* 1915, p. 79).

Yianetsa.—In *Ἀρχ. Ἐφ.* 1915, pp. 86 f., G. MISTRIOTES again defends his theory of the etymology of the name Yianetsa (cf. *ibid.* 1914, pp. 184 f. and 1913, pp. 20 and 200; *A.J.A.* XIX, 1915, p. 479) against that of G. Hatzedakes.

Parchments of the Parthian Period from Avroman.—Two manuscripts in Greek, of dates several years apart but probably in the first century B.C., which were found in 1909 in a sealed jar in a cave near the village of Avroman, north of the road between Bagdad and Hamadan, are somewhat minutely studied in their historical, chronological, palaeographic and legal aspects, and compared with other analogous documents, by E. H. MINNS (*J.H.S.* XXXV,

1915, pp. 22-65). They record very clumsily the sale of a vineyard, and are in the ancient duplicate form, a first or close version, on the upper part of the sheet, being rolled, tied and sealed, and kept for possible reference in the extreme case of a disagreement about the form or meaning of the contract, and an open version, on the lower part of the same skin, which was not sealed and could easily be consulted. There is no exact counterpart known of the alphabet here found, and the use of Greek at this time in so remote a region is itself of interest. A third manuscript, in Aramaic, which was found with them, is very imperfect and has not yet been deciphered.

ITALY

SCULPTURE

Marbles and Small Bronzes in Syracuse.—In *Ausonia*, VIII, 1913 (published in 1915), pp. 44-75 (pl.; 17 figs.), P. ORSI begins a series of articles on the marbles and small bronzes in the museum at Syracuse. These are unpublished or inadequately published, and date from the seventh to the third century B.C. They reveal a native art gradually coming under the influence of Greek art. In this first paper he discusses 1, a nude bronze ephebus, 20 cm. high, which probably dates from the beginning of the fifth century B.C.; 2, a rude bronze figure of a man, of the same date, of native workmanship influenced by Greek art; 3, a nude man (10.3 cm. high), and a man and a woman (7.4 cm. high) both of bronze and very rude; 4, a marble head of a youth from Megara Hyblaea, dating from the first part of the fifth century and showing the influence of Peloponnesian art; 5, three heads of early fifth century date, one of marble and two of terra-cotta, found at Syracuse; 6, the headless statue of a woman in a long robe, of the same date, present height 76 cm.; 7, a bronze statuette, 7.9 cm. high, of a nude youth seated on a stump in a negligent attitude, with his right hand above his head. This figure shows Praxitelean influence.

The Sculptures of the Sanctuary of Apollo at Pompeii.—In *Sitzb. Mün. Akad.* 1915, iii ('Archäologische Bemerkungen, II'), pp. 20-54 (3 figs.), PAUL WOLTERS discusses the remains of the sculptural adornment of the temple and precinct of Apollo at Pompeii and the confused records of their discovery. Six pedestals for statues stood arranged symmetrically with reference to the entrance of the court. One statue only—a draped herm (Reinach, *Rép.* II, p. 813, 5) was found standing *in situ*. Four other statues belonging to four of the pedestals were found: Apollo, bronze (Reinach, *Rép.* I, p. 247, 8); Artemis, bronze (Reinach, *Rép.* I, p. 306, 4); Venus, marble statuette (Reinach, *Rép.* I, p. 336, 3); Hermaphrodite, marble statuette (Reinach, *Rép.* I, p. 373, 1). A second herm must have balanced the one which was found *in situ*. This draped herm, representing Hermes, is a figure associated with the palaestra; the corresponding figure was probably a herm representing Heracles. Apollo and Artemis were placed symmetrically, leaving Aphrodite and Hermaphrodite as a third pair. Apart from Apollo, only Diana and Venus had altars. Obviously works of sculpture were here brought together for the decoration of the sanctuary. The two herms belong properly in a palaestra, and Aphrodite and Hermaphrodite were probably purely decorative figures.

A Roman Marriage Scene.—A terra-cotta relief of a Roman marriage scene

which was formerly in Rome, perhaps in the Vatican, and has disappeared, is preserved in certain drawings and in a plaster cast (60–52 cm.) at Innsbruck, which is published by L. DURREGGER in *Arch. Anz.* 1915, cols. 89–93 (fig.). It closely resembles a Caeretan relief in the Louvre, and shows the soft modelling characteristic of the Roman terra-cotta reliefs. The veiled bride, with her attendant close behind her, is giving her right hand to the bridegroom while she holds the pomegranate in her left hand under her mantle.

VASES AND PAINTING

Sicilian Pottery.—In *Ausonia*, VIII, 1913 (published 1915), pp. 27–34 (3 figs.), B. PACE identifies as Sicilian pottery a small class of vases found at Centuripe having plastic decorations as well as figures painted upon a white slip. Most of the specimens are preserved in Palermo. In a private collection at Girgenti there are somewhat similar vases with plastic decoration consisting of figures, masks, medallions, etc. All these are Sicilian work of the Hellenistic period.

The Initiation of Dionysus.—Under the title *Dionysos Mystes* (Naples, 1915, 66 pp.; 4 pls.; 28 figs.) G. E. RIZZO reprints from *Memorie delle R. Accademia di Archeologia, Lettere e Belle Arti*, III, 1914, a monograph in which he discusses the sculptures and paintings that portray the infancy and boyhood of Dionysus, and particularly his initiation into the Mysteries. In the second part of the work he points out that in a villa near the Porta d'Ercolano at Pompeii a *triclinium* (7.11 m. by 4.96 m.) was excavated in 1909, and about the walls were found paintings representing women, a small boy and satyrs engaged in various occupations. He shows that these scenes, too, represent the initiation of Dionysus.

INSCRIPTIONS

The Decipherment of Etruscan.—In an article entitled 'Le Déchiffrement des Inscriptions étrusques' (*R. Ép.* II, 1914, pp. 171–220), D. ANZIANI discusses various theories of Etruscan linguistic affinities, refuting especially the Turko-Mongolian theory of Carra de Vaux and the Hungarian-Finnish view of J. Martha, and rejects the comparative or etymological method of decipherment in favor of the method of combination, of the cautious use of which he offers some examples.

The Site of the Horrea Agrippiana.—In *B. Com. Rom.* pp. 24–33, G. S. GRAZIOSI publishes the inscriptions of an altar found *in situ* just below the Clivus Victoriae. The front reads:

//////SALVT · GENIVM · HORREOR
 ///GRIPPIANORVM · NEGOTIANTIB
 L · ARRIVS · HERMES
 C · VARIVS · POLYCARPVS
 C · PACONIVS · CHRYSANTHVS
 IMMVNES S · P · D · D

The right side:

POSIT · DEDIC · V · | DVS IVN ·
 CN · COSSUTIO · SYNTROPHO
 L · MANLIO · PHILADELPHO.

These consuls are unknown. The date of the letters is about 200 A.D. The inscription proves the correctness of the author's identification of the Horrea Agrippiana with a group of ruins under the Clivus Victoriae (cf. *ibid.*, 1911, pp. 158-172).

Notes on the Prefects Urbis Romae.—In *B. Com. Rom.* XLII, 1914, pp. 322-327, LUIGI CANTARELLI adds some new material to the list of the prefects *Urbis Romae*.

An Inscription from the Esquiline.—In *Mél. Arch. Hist.* XXXIV, 1914, pp. 383-387, L. A. CONSTANS discusses an inscription recently found on the Esquiline (*Not. Scav.* 1913, p. 466), dedicated to a certain freedman, Epaphroditus, whom he identifies with the owner of the *horti Epaphroditiani* and the *procurator a libellis* of Nero and Domitian.

A Se, de Se, ex Se.—As in Greek ἀπ' ἐαυτοῦ, ἐξ ἐαυτοῦ, ἐκ' ἐαυτοῦ and δι' ἐαυτοῦ without the addition of αὐτός or μόνος may be used to mean "of his own accord," etc., so in Latin the same thing may be expressed by *a se*, *de se* and *ex se* without *ipse* or *solus*. In *Berl. Phil. W.*, October 23, 1915, cols. 1359-1360, T. STANGL discusses this usage in connection with *C.I.L.* VI, 2753 and VIII, 11605^v and 11605b^v.

The Laudatio Funeris in Christian Times.—In *Mél. Arch. Hist.* XXXIV, 1914, pp. 357-368, G. S. GRAZIOSI discusses a Christian inscription of the fifth century, found on the Via Ardeatina (*C.I.L.* VI, 31965). It belonged to the tomb of a certain Claudius Callistus, and illustrates the *laudatio funeris* adapted to Christian usage, of which only one other example is known.

Epigraphic Bulletin.—In their 'Revue des Publications relatives à l'Antiquité romaine' for January-June, 1915 (*R. Arch.*, fifth series, I, 1915, pp. 353-371), R. CAGNAT and M. BESNIER give the text of 73 inscriptions (9 Greek, one bilingual, the rest Latin) and notes on epigraphic publications.

COINS

Dates of First Silver and Gold Coinage in Rome.—Under the leadership of Mommsen most numismatists have held that the Plinian date for the initiation of silver coinage at Rome (269 B.C.) is at variance with the "annalistic tradition," which fixes the date one year later. In *Z. Num.* XXXII, 1915, pp. 15-36, 37-46, OSCAR LEUZE now argues that the latter source has been misinterpreted, and is really in accord throughout with Pliny, so that tradition is unanimous in fixing the date as 269 B.C. With regard to the difficulties in the dating of the first gold coinage Leuze is less positive in affirmation, but holds that there is a very strong probability for so reading and interpreting Pliny as to fix the date given by him as 217 B.C.

Eastern Coinage of the Flavians.—In *R. Ital. Num.* XXVIII, 1915, pp. 139-154 (2 pls.), L. LAFFRANCHI points out that coinage-style includes three particulars: (1) variations in portraiture, which may differ from emission to emission in the same mint; (2) manner in which are treated the lines of the reliefs that form the types of obverse and reverse; (3) lettering, which differs as much from mint to mint as the handwriting of individuals. Applying these tests, he proceeds to classify by mint and emission the coinage issued in the East by the Flavians during the Jewish War.

A Denarius of 69 A.D. from Lugdunum.—A much discussed denarius is:

that bearing on the obverse a bust of Gallia with a Gallic trumpet behind it, and the inscription *GALLIA*, and on the reverse two clasped hands holding two wheat-ears and a standard surmounted by a boar, with the inscription *FIDES* (Cohen², Galba, No. 361). This coin *MARY B. HARRIS* (*Z. Num.* XXXII, 1915, pp. 72-78; 2 figs.) would ascribe to the mint at Lugdunum during the first months of 69 A.D., when the *Legio I Italica* was garrisoning the city. To the same mint and period she would attribute the denarius (Cohen², Galba, No. 358) which shows on the obverse a head of Liberty with diadem and veil, and a wheat-ear in the field, and the inscription *LIBERTAS RESTITVTA*, and on the reverse a seated figure of Concord holding a caduceus and a standard surmounted by a boar, with the inscription *CONCORDIA*.

Value of the Victoriante in Asia Minor.—In an article in *Hermes*, XLVII, 1912, p. 151, *BRUNO KEIL* called attention to the fact that a fragmentary inscription from Magnesia gave testimony to the currency of the victoriante-reckoning in Asia Minor in the second century after Christ. The value of the victoriante in that region and period he was disposed to fix as half the denarius. In *Z. Num.* XXXII, 1915, pp. 47-71, he substantiates by argument this determination, and also points out the reasons for so late a survival of that form of reckoning.

GENERAL AND MISCELLANEOUS

Early Remains in Apulia.—In *Jb. Kl. Alt.* XXXV, 1915, pp. 428-439 (fig.), *H. PHILIPP* discusses the early remains found in Apulia, especially those of Tarentum, Molfetta and Matera, and the evidence which they furnish as to the early inhabitants of this part of Italy.

Villas in the Alban Hills before Domitian.—In *B. Com. Rom.* XLII, 1914, pp. 251-316 (2 pls.), *G. LUGLI* treats of the ancient villas on the Alban hills before the time of Domitian. Seven republican villas are known only from references in the literature; two, those of Clodius and of Pompey, have also been identified with existing ruins; three groups of ruins cannot be assigned to any definite names; two estates of a later time, belonging to Seneca and to the emperor Tiberius respectively, to which we have literary references, cannot be located.

The Changes in the Vicinity of the Esquiline.—*B. Com. Rom.* XLII, 1914, pp. 117-175, *GIOVANNI PINZA*, in an article called 'La vicenda della Zona Esquilina fino ai tempi di Augusto,' coördinates and arranges the widely scattered material on the changes in the vicinity of the Esquiline to the time of Augustus.

Notes on the Monte Testaccio.—In *B. Com. Rom.* XLII, 1914, pp. 241-250 (2 pls.), *RODOLFO LANCIANI* takes up a number of questions connected with the mediaeval and modern history of the Monte Testaccio.

A Manuscript on the Topography of Rome.—In *B. Com. Rom.* XLII, 1914, pp. 41-116 (2 pls.), *MARIA MARCHETTI* publishes and discusses an unedited sixteenth century manuscript on the topography of Rome. "The manuscript does not offer a contribution of new ideas to the history of topographical studies; it offers only a synthetic prospect of those which the Renaissance had for the larger part inherited from the humanists." There is a full discussion of the points on which modern students differ from those of the Renaissance.

The Topography of Rome in the Middle Ages.—In *Mél. Arch. Hist.* XXXIV, 1914, pp. 307–356, and XXXV, 1915, pp. 3–13, L. DUCHESNE, under the title of ‘Vaticana,’ continues the studies begun *ibid.* XXII, 1902, pp. 3–22. In the first of these two articles he discusses the early administration of the basilica of St. Peter, describes the monasteries, deaconries and *schola peregrinorum* that were immediately connected with it, and the *domus Aguliae*, or palace near the obelisk occupied by the papal court when celebrating their vigils in St. Peter’s. *Septimianum* he explains as a name applied to the right bank of the Tiber from the wall of Aurelian to the Vatican quarter, and formed after the analogy of *Vaticanum*, *Ianiculum*. The location of the *Mica Aurea* of region XIV near S. Cosimato is supported and the identification, hitherto accepted, of S. Giovanni in Mica Aurea and S. Giovanni della Malva, is shown to be erroneous. In the second paper, he deals with the actual tomb of St. Peter beneath the *confessio*.

The Lamps of the Hypogeum of the Volumni near Perugia.—In *Boll. Arte*, IX, 1915, pp. 161–164 (6 figs.), D. VIVIANI gives a reconstruction of the hanging lamps of the hypogeum of the Volumni near Perugia. Instead of being suspended by winged genii, Lares or Penates, as heretofore supposed, the genii really have swans behind them. Apollo is thus represented in the aspect of singer. With this interpretation of the lamp figures as Apollo the other decorations of the tomb, the sun disks, the dolphins, the lyre player, the shepherd, and the sacred owl, become of clear significance, for all are connected with the Apollo cycle. *Ibid.* pp. 245–248, G. BENDINELLI points out that practically the same reconstruction of the lamps was made at the time of discovery in 1840 by G. B. Vermiglioli, who did not, however, identify the genii as Apollo, and with good reason, for the swan does not necessarily imply Apollo and the winged type of figure certainly does not. Moreover the so-called sun disk is an ordinary shield with Medusa head and the other symbols mentioned are not peculiar to the god Apollo.

The Porta Venere and Torri di Properzio at Spello.—In *Boll. Arte*, IX, 1915, pp. 301–304 (4 figs.), D. VIVIANI discusses briefly the Porta Venere and Torri di Properzio at Spello, Umbria. Recent investigation has revealed a Roman road here and has shown that the gate, towers, and adjoining wall are all Roman of the end of the last century B.C.

Roman Malta.—In *Journal of Roman Studies*, V, 1915, pp. 23–79 (3 pls.; 34 figs.), T. ASHBY discusses Roman Malta, its history and remains.

Hyginus and the Plan of the Roman Castella.—Some misunderstandings in v. Domaszewski’s comparison of the *pedatura* (spacing) inscriptions of the Roman camp at Zugmantel and in other published studies of similar matters are pointed out by J. H. HOLWERDA in *Arch. Anz.* 1915, cols. 59–86 (7 plans). If such facts are borne in mind as that the space to be allowed for walls differs according as the building is of stone or wood; that cavalry quarters must include room for the horses; that draught animals would not be kept in the barracks of a permanent or garrison camp, while in a bivouac or night encampment they must be on the spot ready for immediate use; that in garrison the centurions and petty officers had their own houses in front of the long buildings in which their companies lived, but in the marching camps were quartered among the men; that the number of men in a century of legionaries differed from a cavalry century, and the latter was smaller if from a *cohors*

quingenaria than if from a *cohors milliaria*—it will be seen that Hyginus's figures are generally applicable and that it is possible to fix with some accuracy the number and character of the troops and the positions occupied by each, in any camp in which the outlines of the soldiers' quarters can be traced. Arentsburg, near the Hague, Novaesium (Neuss), and Gellygaer in Scotland are cited in illustration.

The Date of the Arch of Titus.—The date of erection of the Arch of Titus is believed by D. McFAYDEN (*Cl. J.* XI, 1915, pp. 131-141) to have been, not immediately after his death, but rather after that of Domitian, as part of the revulsion that took place against Domitian's memory and a consequent glorification of that of Titus.

The Origin of the Roman Mosaic.—In *Boll. Arte*, VIII, 1914, pp. 273-277 (colored pl.; 5 figs.), C. RICCI suggests that the idea of floor mosaics so common among the Romans was derived, though perhaps not directly, from the glazed brick walls of Persia.

A Roman Helmet from Holland.—In *Journal of Roman Studies*, V, 1915, pp. 81-86 (3 pls.; 2 figs.), J. CURLE discusses a Roman helmet found in the Waal below Nijmegen, Holland. It consists of a head-piece with vizor mask surmounted by a diadem. The portion covering the head is of iron; the mask and diadem are of bronze or brass. Across the right cheek is scratched MARCIANUS. It is a provincial helmet and may date from the first century B.C. There were found with it two bronze cheek-pieces overlaid with silver which belonged to a helmet of a different pattern, and several melon-shaped blue glass beads.

The Neapolitan Phratry.—G. DE SANCTIS offers (*R. Ép.* II, 1914, pp. 306-309) an explanation of a Greek inscription dealing with a Neapolitan phratry published by A. Majuri in *Studi Romani*, I, pp. 21 ff.

Curatores Viarum.—In *R. Ép.* II, 1914, pp. 237-247, M. RAT and J. BAYET continue their study of the *curatores viarum*, treating in particular the seven cases known of *curatores* of the Appian Way, whose office was one of the most important of the charges assigned to *praetorii*.

The Lex Rubria.—M. BESNIER (*R. Ép.* II, 1914, pp. 309-311) summarizes the view of J. M. Nap (*Themis*, 1913, No. 2; 1914, No. 1) that the so-called *Lex Rubria de Gallia Cisalpina* (*C.I.L.* I, 205) dates not from 49, as Mommsen supposed, but from about 81 B.C. (or at least between 86 and 81).

Roman Cursive Writing.—In a book entitled *Roman Cursive Writing*, HENRY BARTLETT VAN HOESSEN gives a brief general introduction, a description of Pompeian graffiti, early lead tablets, Pompeian wax tablets, Dacian and Egyptian wax tablets, and a detailed description of 141 ostraca and papyri and their alphabets, followed by a summary history of the Roman cursive alphabet from its origin to the time of its development into the "national hands," a partial list of Greek documents containing Latin subscripts, a bibliography, and a brief description of abbreviations in Latin papyri. Eighteen plates illustrate the alphabets of individual papyri and ten tables exhibit the development of the cursive script. [HENRY BARTLETT VAN HOESSEN, *Roman Cursive Writing*. Princeton, 1915, Princeton University Press. viii, 268 pp.; 18 pls.; 10 tables. 8 vo. \$2 net.]

The Volcanalia.—In *B. Com. Rom.* XLII, 1914, pp. 176-195, TINA CAMPANILE discusses the sacrifice of fish to Vulcan, the identity of the gods honored

together with Vulcan, the sacrifice of a red calf to Vulcan, the date of the institution of the *ludi Vulcanalici*, and other questions connected with the Volcanalia.

SPAIN

The Antiquities at the Palace of Cerralbo.—In *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 225–231 (2 pls.), is given an account of a visit to the palace of Cerralbo and a general description of the antiquities preserved there.

FRANCE

The Menhirs of Ile d'Yeu.—In *L'Homme préhistorique*, II, 1914, pp. 334–343 (4 figs.), M. BAUDOUIN discusses the menhirs of Ile d'Yeu (Vendée).

The Feet on the Dolmen of Petit-Mont.—In *L'Homme préhistorique*, II, 1914, pp. 257–275 (5 figs.); 313–319 (3 figs.), M. BAUDOUIN publishes a study of the relief representing a pair of feet cut on the dolmen of Petit-Mont at Arzon (Morbihan). It dates from the period of polished stone.

An Unexplained Group from Nérís.—In *R. Arch.*, fifth series, II, 1915, pp. 155–164 (2 figs.), S. REINACH proposes an explanation for a fragmentary group of sandstone, which represents a mare treading upon a child. The group (Reinach, *Répertoire*, I, p. 268, 5; Espérandieu, *Recueil*, II, No. 1568), which is now at Saint Germain, came from Nérís. This place possesses mineral springs which were visited in antiquity, as in modern times, on account of their healing properties. The explanation offered is this: Epona, the horse-goddess, was regarded as the deity of the springs, and by placing her foot on the child she performs a miracle of healing. The group may represent a dream, or a mare may actually have been trained to place her hoof upon those who came to be healed.

SWITZERLAND

Antiquities in Geneva.—In *R. Arch.*, fifth series, I, 1915, pp. 303–325 (15 figs.), W. DEONNA supplies additions and corrections to the previous lists and discussions of antiquities in Geneva (*R. Arch.*, 1910, II, pp. 401–412; A. Cartier, 'Le Musée d'Art et d'Histoire de Genève,' in *Compte rendu du XIV^e Congrès international d'Anthropologie et d'Archéologie préhistoriques*, Geneva, 1914, II, pp. 497 ff.; E. Doumergue, *La Genève des Genevois*, 1914, pp. 264, 271 f.; G. Nicole, in Arndt-Amelung, *Photographische Einzelaufnahmen Antiker Skulpturen*, VII, 1913, pp. 11 ff.). Most of the objects described are in the Musée d'Art et d'Histoire. Among them are casts of some of the marbles from Aegina, made before Thorvaldsen's restorations. Several vases and bronzes are also of interest. A treasure of silver, found in 1912 at Fins d'Annecy, is to be published by Mr. Cartier. Its most important piece is a patera with reliefs which picture the victory of Augustus at Actium. A page is devoted to the epigraphic collections and the Duval collection, which last contains several works of ancient sculpture and some "Campana reliefs."

GERMANY

The Tumuli near Haguenau.—In *L'Homme préhistorique*, II, 1914, pp. 321–333 (5 pls.; fig.), L. COUTIL discusses the discoveries made in the tumuli in the

forest of Haguenau (Alsace), where excavations have been carried on for many years. Nessel opened about 700 of them. Numerous vases and objects of metal from the mounds are preserved in the museum of Haguenau. There are many beautiful specimens of pottery which date from the second and third periods of the Bronze Age, and from the Hallstatt period.

NORTHERN AFRICA

Corrections in Inscriptions.—In *R. Ép.* II, 1914, pp. 311–315, J. CARCOPINO offers corrections in the text of certain inscriptions from Djemila recently published by A. Ballu.

An Inscription from Djemila.—In *R. Ét. Anc.* XVII, 1915, pp. 183–185, R. CAGNAT points out that two inscriptions from Djemila (*C.I.L.* VIII, 20150 and 8311) are really parts of one inscription which he restores thus: [Ma]rti A[ug]. Genio [col(oniae) qua]m Flavius Breucus fl(amen) [p(er)p(etuus) de sua] pec(unia) dederat res p(ublica) ba[sim cum columnis et tholo fec[it cu]rantib(us) L. Oct[a]vio [N]ata[li] et C[lassio] Honorato II[ri]viris. D(ecreto) d(ecurionum)].

GREAT BRITAIN

A Silver Dish from the Tyne.

—An oblong silver dish or lanx, found in the river Tyne in 1735 and now belonging to the Duke of Northumberland, is published by P. GARDNER in *J. H.S.* XXXV, 1915, pp. 66–75 (fig.). The picture in relief (Fig. 4), with incised details, shows a group of



FIGURE 4.—SILVER LANX FROM THE TYNE

Greek divinities, the huntress Artemis at one end and Apollo in his Delphic shrine at the other, with Athena, Aphrodite and Hera between. It is apparently a late transformation of the scene of the Judgment of Paris, with Apollo taking the place of Paris, as is not unknown in some late vase paintings. The types are purely Hellenistic, with slight suggestions of Christian, but nothing of Roman art. A date in the early part of the fourth century A.D., and an origin in one of the great cities of Asia Minor seem most probable. The presence of Artemis in the main scene and of her symbols in the separate narrow field below suggest Ephesus. The guild of silversmiths that flourished here under the patronage of the temple may well have worked for secular purposes as well and have survived to this late date.

EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

The Tomb of St. Polycarp and the Topography of Ancient Smyrna.—In *B.S.A.* XX, Session of 1913–1914, pp. 80–93 (2 pls.), F. W. HASLUCK, after citing the literary evidence, makes the following deductions as to the history of the traditional tomb of St. Polycarp. “As early as 1622 an empty sarcophagus inside a humble dwelling was associated with S. Polycarp and revered by Greeks and Turks alike: the tomb was Mohammedan in form, and in charge of a dervish. About the middle of the seventeenth century it passed into Christian hands. In the eighteenth the sarcophagus seems to have been removed, or at least the cult transferred by the Turks to the site of the present tomb, while the supposed chapel continued to be revered by Christians. The prestige of the sarcophagus made the outwardly Turkish tomb still an object of reverence for Greeks, who were encouraged from interested motives by the custodian.” Tradition at Smyrna is not to be trusted. Various sites have been associated with St. John and St. Polycarp. The ruins on the castle hill, to which the name “judicatorium” has been given, are probably the remains of the ornamental terminus of the Kara-Bounar aqueduct or *Aqua Traiana*.

Christian Buildings in the Asclepieum at Athens.—In *’Αρχ. ’Εφ.* 1915, pp. 52–71 (22 figs.), A. XYNGOPOULOS describes and classifies the fragments of Christian architecture discovered on the site of the Asclepieum at Athens. These belonged to two churches of the fifth and the tenth (or eleventh) century respectively, the two most flourishing periods of early Christian art in Greece, while foundations of the apses of three churches are shown on the plan of Lambert (1877). The long building close to the Acropolis rock may have been the dining room of a small monastery. The adjoining cave seems to have been used as a chapel.

The Monastery “APMA.”—Commenting on Georgiades’ article (*’Αρχ. ’Εφ.* 1914, pp. 192–197) on the Monastery of St. George near Eretria, A. XYNGOPOULOS (*’Αρχ. ’Εφ.* 1915, pp. 84 f.) offers several possible explanations of the inscription APMA, dates the church in the tenth or eleventh century, says the meander relief is of a type not at all unique, but very common in Christian art, and assigns the wall paintings of the narthex, the artistic value of which he thinks Georgiades has underestimated, to the seventeenth or eighteenth century.

“Eretrian” Meander Pattern.—In *’Αρχ. ’Εφ.* 1915, p. 94 (fig.), A. S. GEORGIADIS publishes a drawing showing how the meander pattern, carved in relief upon a marble slab in the church of the Monastery of St. George (cf. *ibid.* 1914, pl. 5), is to be restored as a continuous frieze.

A Statuette of the “Good Shepherd.”—In *’Αρχ. ’Εφ.* 1915, pp. 34–43 (6 figs.), G. A. SOTERIOU publishes a marble statuette in the National Museum at Athens (No. 2828), representing the Good Shepherd as a boy carrying a sheep on his shoulders, to be dated in the neighborhood of 300 A.D. This new specimen upsets the former classification of Good Shepherds, sculptured in the round, into an earlier and a later group, by having characteristics of both groups, which, therefore, appear to have existed side by side. The statuette probably served as a tombstone.

The Sassanid Church and its Decoration.—In *Mh. f. Kunstw.* VIII, 1915, pp. 349–365 (21 figs.), J. STRZYGOWSKI makes the reviewing of two recent publications, Gertrude Lowthian Bell's *Churches and Monasteries of the Târ Abdîn and Neighboring Districts* and Ernst Herzfeld's *Erster vorläufiger Bericht über die Ausgrabungen von Samarra*, the occasion to present, in anticipation of the appearance of his work on Armenian architecture, new material for the Persian church, its architecture and decoration. The citadel church of Amida, in spite of the later Mohammedan decoration, shows the conch buttressing, the barrel vault terminating in two half domes, and the dome supported on trompes over a cruciform ground-plan—all features which were already characteristic of the Sassanid palace at Sarvistan and which played a fundamental rôle in Armenian architecture. The stucco work, which became so important in the art of Islam and of which the excavations at Samarra reveal beautiful ninth century examples, is a branch of art the practice of which must have radiated from Iran. Fine examples of it are still to be seen in Khargird (Khorassan) and imitations are found in the remains of the deserted cities of Turkestan. This spread of stucco decoration to the East is due to the influence of the Persian church, an influence which extended, as the stele of Singan Fu tells us, into the heart of China. The same church was throwing out ideas to the West, furnishing models of doming and of stucco decoration, and giving to the Byzantine church its ceremony and imperialistic character.

Representations of the Buildings of Jerusalem.—In *Or. Christ.* IV, 1915, pp. 64–75 (2 pls.), A. BAUMSTARK recognizes on an ivory diptych of the treasury of Milan Cathedral a series of representations of the early Christian buildings of Jerusalem: Church of the Anastasis, Church of the Apostles, the arcade of the courtyard between the first mentioned church and that of the Martyrs, the east gate of Hadrian's Aelia Capitolina, and Hagia Sophia with the adjacent cubiculus of the Flagellation—all in connection with those events traditionally localized with them.

Two Early Coptic Printed Stuffs.—In *Burl. Mag.* XXVII, 1915, pp. 168–169, W. R. LETHABY supplements in a letter to the editors the article, 'Two Early Egyptian Printed Stuffs,' by F. Birrell (*Ibid.* pp. 104–109; cf. *A.J.A.*, 1915, p. 364), pointing out that the maidens in attendance on the throne in the Edinburgh piece are the Wise and Foolish Virgins, and calling attention to a curtained niche in the fragmentary band above in which was the Christ. To the right of Daniel in the Berlin fragment Lethaby recognizes the figure with hands upraised as belonging to a representation of the Three Hebrews in the Fiery Furnace. This combination of deliverance subjects suggests that the pieces were originally parts of shrouds. On one of the fragments of the Victoria and Albert Museum Lethaby sees a procession of saints with crowns rather than a Communion of the Apostles. In an appended note F. BIRRELL makes some orthographical corrections of his own article.

Iunctio Manuum.—In *L'Arte*, XVIII, 1915, pp. 305–315 (6 figs.), E. TEA studies the *iunctio manuum*, and finds that in the West it was not a liturgic attitude of prayer until the ninth century at least, when the practice was being bitterly debated in the church. In Western art there are only sporadic and doubtful examples until the twelfth century; but it becomes common with the Gothic in France and the Proto-Renaissance in Italy.

The Hunting Tapestry in the Minneapolis Institute.—In *Art in America*,

III, 1915, pp. 224-226 (pl.), J. BRECK writes a short note on the newly acquired fifteenth century Burgundian Hunting Tapestry of the Minneapolis Institute of Art and gives a colored illustration of it (see *A.J.A.*, 1915, p. 366).

Early Textiles in the Cooper Union Collection.—In *Art in America*, III, 1915, pp. 231-254 (13 figs.), 300-308 (6 figs.), and IV, pp. 43-52 (10 figs.), R. MEYER-RIEFSTAHL discusses the early textiles in the Cooper Union collection. The two theories, one of which traces early mediaeval textile styles back to Egypt (Falke), the other to Persia (Strzygowski), each have their measure of truth. The hostile relations of the Roman and Sassanian empires prevented important commercial relations between them and thus it was really Alexandria which was the commercial centre of the textile industry. For no great



FIGURE 5.—VIKING SHIP FROM OSEBERG

amount of silk came through the Sassanid kingdom to the West, most of it coming by the water route to Alexandria. On the other hand, Alexandrian weavers furnished their customers with designs directly imitated from Sassanian fabrics. While the Cooper Union has no Sassanian textiles, of which there are but few preserved, it has good examples of their imitation both by the later Byzantine and Moslem weavers and also by the more nearly contemporary looms of Egypt. From Egypt, however, the provincial Coptic work is better represented in our museums and in the Cooper Union than is the finer Alexandrian product. These native textiles are interesting as illustrating local and plebeian art and as showing the basis on which many of the later designs of Mohammedan art were founded. Under the Arabs the textile art flourished, but larger figurative work was in abeyance until the time of the tolerant Fatimites, 969-1171. The Cooper Union possesses ten interesting figured fragments of the Mohammedan era, of which the most important one presents in the traditional medallions pairs of women drinking.

The Origin of Romanesque Ornament.—In *Mh. f. Kunstw.* VIII, 1915, pp. 309-328 (16 figs.), A. HAUPT emphasizes the part of the old Germanic wood architecture and carving in the origin and development of Romanesque architectural ornament. For the great importance of wooden architecture up to Romanesque times there are plenty of documents, and even, especially in the extreme north, some considerable remains of the ornament are found on minor works. Such are the wooden decorated objects in graves; the choir stalls;

the old wooden church portals of Norway and the so-called chapel in the church at Hopperstad; the blockhouse, Raulandstuen, in the Bygdø Museum at Christiania; various ecclesiastical benches and chairs, including especially the so-called Viking Thrones; the early decoration of the church at Urnäs; and above all the curious, huge burial monuments known as the Viking Ships, of which a ninth century example in good preservation (Fig. 5) has recently been found at Öseberg. On the one hand these actual monuments in wood show prototypes of Romanesque carving, generally even richer in ornament than could be carried out in decorative stonework. On the other hand Romanesque ornament in stone, witness the door in Tirol Castle (Fig. 6), displays conscious imitation of wood-carving. Looked at from either viewpoint this is the proof that ancient native tastes, though not responsible for ground-plan and construction, moulded the formal and decorative side of the architecture denominated Romanesque.

Ambiguous Sanctuaries.—In *B.S.A.* XX, Session of 1913–1914, pp. 94–122, F. W. HASLUCK discusses the Bektashi sect in relation to orthodox Islam and to Christianity, especially as it affects the numerous “ambiguous sanctuaries,” where a previous Christian cult is overlaid by a Bektashi cult. A note on



FIGURE 6.—DOOR OF TIROL CASTLE

Haidar, Khodja Achmet, and Karadja Achmet shows how the three are confused. Khodja Achmet lived long before Hadji Bektash.

Catalogues and Collections of Incunabula.—In *R. Arch.*, fifth series, I, 1915, pp. 283–302, SEYMOUR DE RICCI contributes an essay on collections and catalogues of early printed books, pamphlets, and sheets, *i.e.*, those printed before 1501.

ITALY

S. Maria Maggiore.—In *Boll. Arte*, IX, 1915, pp. 20–32, 136–148 (14 figs.), G. BIASIOTTI makes a careful technical study of the materials used in the construction of S. M. Maggiore and of the manner of their use, and gathers the available evidence concerning the earlier buildings on the site as revealed by excavation. The evidence of both lines of research indicates that this Roman church cannot antedate Sixtus III. Interesting incidental points disclosed are that the horizontal architrave is of brick and mortar and that, as far as can

be judged by technique, the mosaics of nave and triumphal arch are contemporary with each other and with the other mosaics of Sixtus III in S. Sabina.

S. Maria Maggiore before the Sixteenth Century.—In *Mél. Arch. Hist.* XXXV, 1915, pp. 15-40, G. BIASOTTI deals with the history of S. Maria Maggiore before its rebuilding in the sixteenth century.

Reconstruction of the Schola Cantorum of S. Saba.—In *Boll. Arte*, IX, 1915, pp. 129-135 (5 figs.), M. E. CANNIZZARO and I. C. GAVINI defend the manner in which the Schola Cantorum of S. Saba has been reconstructed and show the reasons for this reconstruction in preference to that proposed by P. Styger (see *A.J.A.*, 1915, p. 209). A combination of the evidence derived from the pieces preserved and from the corresponding furnishing of the other Roman churches determined the plan of restoration.

S. Maria di Fälleri.—In *Rass. d'Arte*, XV, 1915, pp. 199-208 (10 figs.), A. VALLE describes the ruined twelfth century church of S. Maria di Fälleri and indicates its importance as the model for the ecclesiastical architecture of Civita Castellana and the surrounding country.

The Palace of Theodora.—In *B. Com. Rom.* XLII, 1914, pp. 328-342, G. S. GRAZIOSO publishes an inscription recently found in the course of repairs to the church of S. Sabina on the Aventine, which seems to refer to Theodora I, who was so prominent in Rome during the tenth century. The inscription is carved on a stone at least 2.30 m. long, originally the lintel of a large door, presumably in the palace of Theodora which is thus located on the Aventine. Other evidence for putting the palace here is adduced.

The Churches of Caramanico.—In *L'Arte*, XVIII, 1915, pp. 258-271 (9 figs.), P. PICCIRILLI discusses various churches in and near Caramanico. S. Tommaso in Varano is a typical Benedictine church built in 1202. It is a three-aisled basilica without transept, and has on the lintel over its principal door figures of Christ and the Apostles. On one of the interior pillars are frescoes, which are closely related to those of S. Maria ad Cryptas of Fossa, of S. Pellegrino of Bominaco, and of the grotto of St. Thomas at Anagni, all of which must date from the thirteenth century. S. Maria Assunta was originally a Romanesque church, renewed in the fifteenth century. The main door is dated 1452; and the lunette above the Coronation of the Virgin was made by Johannes Biomen of Lübeck in 1476. The exterior of the apse is decorated with several statues, and within the church is a silver Virgin of French style of the thirteenth century. The fifteenth century campanile is divided by mouldings into four stories and has a pyramidal roof. The principal remains of S. Tommaso d'Aquino (founded in 1401) are two portals, one attributed to a Lombard and the other to a German master. The original character of both S. Nicola and S. Maurizio has been lost but their campaniles are similar to that of S. Maria Assunta. In S. Maurizio is a Madonna triptych of the style of Carlo Crivelli; another picture, perhaps by the same artist, is a Madonna from S. Maria now in the cabinet of the local syndics. A third Venetian painting of about the same date is a triptych in S. Maria Assunta representing the Madonna and Christ in the house of Levi in the middle panel, and six saints at the sides. Of the profane architecture of Caramanico of this time the remains are but few.

Sculptures in the Campo Santo of Pisa.—In *Boll. Arte*, IX, 1915, pp. 169-178, 209-216, 264-280 (45 figs.), R. PAPINI discusses the origin of Pisan sculpture

and its development from the twelfth to the fifteenth century with especial regard to the Campo Santo collection. From the very beginning of the Romanesque series of monuments in the second half of the twelfth century the imitation of the antique was the source of inspiration. The three stylistic groups into which Venturi tried to divide the twelfth century sculpture are too closely interrelated to stand, but chronologically the late twelfth century can be sharply distinguished from the early thirteenth. Suddenly and incomparably superior to the foregoing, however, rises Nicola Pisano; incidentally let it be mentioned that the extra lion on the stair of his pulpit in the Pisan Baptistery can be identified from a drawing by Dosio as that made by Giovanni Rossi in 1320 to support the famous Bacchic crater on a column in front of the Pisan Cathedral. Next comes Giovanni Pisano, who first founded a school and of whom there are two Madonnas in the Campo Santo. Besides his sons Nino and Tomaso he had other pupils of three distinct personalities, the dependent and very Gothic Master of the pulpit of S. Michele in Borgo the decorative Tino di Camaino, and the solemn and non-Gothic Master of the Gherardesca monument. The trio of Quattrocento sculptors are Matteo Civitali; Stagio Stagi; and Andrea Guardi, whose dismembered Ricci monument, part in the Campo Santo, part in the Cathedral, followed very closely, both in date and plan of composition, that of John XXIII in the Florentine Baptistery. Like other collections that of the Campo Santo has pieces of doubtful pedigree. The bust of Junius Brutus and that of Hadrian seem to be imitations of about 1600; two little reliefs of Roman emperors (Nos. 348 and 349) are probably of the fifteenth century rather than antiques; the relief of the Three Graces seems of the fourteenth century though a conscious reflection of ancient relief style; and the supposed Isotta da Rimini appears to be an eighteenth century counterfeit of Quattrocento sculpture.

The Roof of the Vatican Basilica.—In *Mél. Arch. Hist.* XXXV, 1915, pp. 81-117, M. CERRATI describes the reconstruction of the roof of the Vatican basilica by Benedict XII in 1335-1337, and publishes some of the documents relating to this work.

Mediaeval Jewelry at Venafrío and Isernia.—In *Rass. d'Arte*, XV, 1915, pp. 43-48 (9 figs.), P. PICCIRILLI describes a head of gilded silver at Venafrío, the work of Barbato of Sulmona and dated 1340, and several silver pieces in the cathedral treasury at Isernia. A reliquary and two chalices resemble work of about 1400 and are probably Sulmonese also; two crosses, one of the thirteenth, the other of the fourteenth century, are of French workmanship.

The Gesta Romanorum as a Secondary Historical Source.—In *Mh. f. Kunstw.* VIII, 1915, p. 251, V. C. HABICHT calls attention to the importance of the *Gesta Romanorum* as a secondary source for art history and exhibits in particular a passage which proves that the statues of Frederick II and his two judges at the Capua castle actually had the inscriptions recently denied them.

Romanesque Architecture in Aretine Territory.—In *Rass. d'Arte*, XV, 1915, pp. 30-42, 63-72, 134-144, 156-164 (78 figs.), M. SALMI traces in a monograph the history of Romanesque architecture in Arezzo and the Aretine country with especial attention to the rural churches, as well as the urban ones.

S. Miniato al Monte.—In *Boll. Arte*, IX, 1915, pp. 217-244 (14 figs.), L. DAMI makes an extended study of the church of S. Miniato al Monte, Florence. An act of Henry IV indicates that the church was constructed by 1062. Of

the façade the first story and the lattice work design of the second date before the founding of the Collegiata of Empoli modelled after S. Miniato, 1093; the remainder belongs to the second half of the next century, except, perhaps, the façade mosaic, which like that of the apse has been so much restored as to render the original date doubtful. The church contains well-known frescoes and panels of the Florentine Trecento. The episcopal palace dates from 1295; the convent, though rebuilt, is of much older founding.

Lombard Architecture.—The Yale University Press has issued as Volume IV of ARTHUR KINGSLEY PORTER'S *Lombard Architecture* an atlas of 244 plates, in which are shown all the important examples of Lombard architecture in Italy. Besides views of buildings many architectural details are reproduced. Each plate usually contains several figures, so that the actual number of illustrations in the volume amounts to a thousand or more, a large proportion of which are from the author's own photographs. The three volumes of text will be published in 1916. [*Lombard Architecture*. By ARTHUR KINGSLEY PORTER. Vol. IV. New Haven, 1915, Yale University Press. 244 pls. Folio. \$15 net.]

SS. Severo and Martirio near Orvieto.—In *Boll. Arte*, IX, 1915, pp. 193–208 (16 figs.), L. FIOCCA describes the ruinous but recently restored church and abbey of SS. Severo and Martirio outside of Orvieto. The foundation dates from the ninth century but was rebuilt two centuries later. The architecture is like that of other contemporary abbeys of central Italy, entirely Lombard Romanesque except for the Cistercian ground-plan and the simple use of the pointed arch and the ribbed cross-vault.

Monuments Damaged or Destroyed by the Earthquake.—In *Boll. Arte*, IX, 1915, pp. 33–112 (112 figs.), there is an account of the districts and monuments affected by the great earthquake of January 13, 1915. In *Pagine d'Arte*, III, 1915, pp. 32–33 (6 figs.), P. PICCIRILLI writes of damages from the earthquake in the Abruzzi (see *A.J.A.* 1915, p. 358).

SPAIN

An American Collection of Spanish Pottery.—In *Burl Mag.* XXVIII, 1915, pp. 64–75 (pl.), A. VAN DE PUT reviews Barber's recent pottery and majolica catalogues of the Hispanic Society and adds some notes of interest: Bosco's excavations revealed the use of lustre pigment upon tin enamel already in the ninth and tenth centuries, Cock's report of the process of the Moors of Muel is a gross mistranslation, the wheel pattern dates back into the fifteenth century, the majolica portrait supposed to be the ninth Count of Aranda cannot be so identified but may be the tenth.

GERMANY

The Naumburg Lectern Crucifix in the Kaiser-Friedrich Museum.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 137–152 (pl.; 17 figs.), A. GOLDSCHMIDT discusses the crucifix group, Christ and the Virgin alone preserved, acquired in 1913 by the Kaiser-Friedrich Museum from the Moritzkirche in Naumburg. The treatment of the loincloth and the attitude of the Christ with the crossed feet pierced with a single nail, an innovation in Saxony due to French influence, permit the group to be dated iconographically about the twenties of the

thirteenth century. In this group the Saviour and Virgin both seem to show the characteristics of a miniature rather than a plastic tradition. There are a number of other Saxon crucifixes of the same general type and date. The most closely related is that in the Catholic church at Wechselburg. Other examples are those in the Halberstadt Liebfrauenkirche, in the Dresden Altertumsmuseum from Freiberg, in the Merseburg Cathedral, in the Corvey monastery church, in the Hannover Provinzialmuseum from Alfeld—all of French inspiration.

The Bamberg Treasury.—In *Burl. Mag.* XXVIII, 1915, pp. 14–20, 60–65 (4 pls.), M. CONWAY discusses the material offered by the monumental publication of E. Bassermann-Jordan and W. M. Schmid, *Der Bamberger Dom-schatz*, Munich, 1914. This wonderful collection was like the cathedral founded by Heinrich II and Kunigunde. Since 1803 the bulk of what has been preserved has been in Munich. As objects precious for their rarity and beauty alike there are the glass “Cup of S. Kunigunde” and an onyx dish, both probably Alexandrian work of Roman imperial times; a knife of the time of the barbarian invasions in a carved ivory sheath of Merovingian or Carolingian date; a mace-head and the reliquary “Lamp of St. Kunigunde,” both rock-crystal of Egyptian Fatimite workmanship. The bookbindings of the ninth and early tenth century in the collection are silk partly overlaid with silver plate; those of the late tenth are of the Greek type introduced by the workmen of Theophania, Byzantine bride of Otto II, and show a central ivory in a wide golden frame inlaid with jewels, not set haphazard in the barbarian massive fashion but with Byzantine regularity and fineness of accompanying filigree work. There are numerous other independent ivories representing both eastern and western carving. Of the reliquaries the most precious is the flat cross reliquary in a gold frame now in the Reiche Kapelle at Munich. The “Crown of St. Kunigunde” is also in Munich in the Schatzkammer and the most interesting of the crowns preserved, for part of it goes back to the eleventh century. Its coronet was added in the fourteenth century, the date also of the two other crowns of the collection. Of other objects the two wooden caskets covered with bone carvings of Scandinavian character set in bronze are notable.

Mysticism in Sculpture of Cologne and the Lower Rhine.—In *Mh.f. Kunstw.* VIII, 1915, pp. 223–237 (12 figs.), G. E. LÜTHGEN traces the influence of mysticism in the sculpture of Cologne and of the lower Rhine in the fourteenth century, during which the upper reaches of the Rhine showed great development, while the lower country clung to the old thirteenth century forms mixed with strong infusion of mystic, *i.e.*, Franciscan ideas. The sculpture in stone is less representative than that in wood, above all the wooden crucifixes. The crucifix in St. Maria im Kapitol, Cologne, dated by a lost inscription 1304, and the Heimbach crucifix of the Graf von Isenburg now in the Cologne Kunstgewerbemuseum, dated by the donors represented about 1300, offer a definite chronological basis for study of the mystical movement. Its close resemblance to the crucifix of St. Maria im Kapitol dates the crucifix of St. Severin, Cologne, in the first decade of the fourteenth century. Slightly later in the first third or at latest in the first half would fall the crucifix of St. George, Cologne, and that of the Katholische Pfarrkirche, Kendenich. Apart from a few belated examples the influence of mysticism is but weakly

perceptible in crucifixes of the end of the century, for Cologne, too, fell in line with the general contemporary tendency of German sculpture to quiet beauty of form; but further down the Rhine radiations of the city's passionate mystical style held their ground down to 1400 and later, gradually amalgamated with the more delicate, less plastic style of North France and Belgium. From the union of the mild type, illustrated by the crucifix of Oplinter, Belgium, itself a type also ultimately mystic and Franciscan, and the harassing Cologne type, came as legitimate offspring the crucifix of the Katholische Pfarrkirche at Linn, one in the Schnütgen museum, and a later one in the Katholische Pfarrkirche at Dinslaken. The dating of the crucifix of St. Maria im Kapitol in 1304 is as important for establishing the chronology of Pietàs as for crucifixes. Of about that date should be the Röttgen Pietà of the Bonn Provinzialmuseum while the degenerate variants of St. Andreas, Cologne, and of the Pfarrkirche, Knechtsteden, are to be set roughly a century later.

The Master of

Naumburg.—In *Mh. f. Kunstw.* VIII, 1915, pp. 263–273 (10 figs.), E. COHN-WIENER begins the study of the Master of Naumburg with an article on the statues of the founders in the west choir of Naumburg Cathedral. The statues fall into two groups. Six of the men, now named Conrad, Dietrich (Fig. 7), Timo, Wilhelm, Sizzo, and Ditmar, belong to



FIGURE 7.—SAINT;
NAUMBURG



FIGURE 8.—TWO SAINTS;
NAUMBURG

an earlier plan showing the influence of the original scheme at Magdeburg and mentioned in a letter of Dietrich II in 1249; it allowed six male and five female figures in the choir. A subsequent rearrangement, definitely under the influence of Ste. Chapelle at Paris, and a changing of position and names gave the present eight male and four female figures. Gepa, Gerburg, Hermann and Regelindis (Fig. 8), Eckhard and Uta, fall in the later period. A round keystone in the chapel of the cemetery carved with St. John Baptist was probably made for the vault of the first plan. The style of the Master of Naumburg is derived from the funeral sculpture of Saxony rather than from French prototypes. His work must have been in place by 1270 for the tomb of Graf von Gleichen (died 1264) in Erfurt Cathedral and that of Graf Heinrich von Solms, (died soon after 1258) in Kloster Altenberg near Wetzlar, show unmistakable imitation.

RENAISSANCE ART

ITALY

Niccolò Fiorentino.—In *Mh. f. Kunstw.* VIII, 1915, pp. 187–197 (15 figs.), H. FOLNESICS studies a follower of Donatello's latest style, Niccolò Fiorentino, first mentioned in connection with Andrea Alexi in a document of Traù in 1468. An earlier monument, however, which is attributable to Niccolò is the arca Sancti Rainerii in Castell Vitturi near Spalato. This is not of Florentine form, probably because its maker was obliged by contract to follow a design of Giorgio da Sebenico, to whom the commission was originally entrusted. But aside from those parts which point to the coöperation of Alexi it echoes numerous motives from Donatello. The next work assigned to Niccolò is the Donatellesque Flagellation in the Berlin museum. It reflects the influence of Giorgio da Sebenico though probably done in Florence on some home-coming of the sculptor. Another Florentine work which stands in immediate relation to Niccolò is a design of the Uffizi hitherto doubtfully ascribed to Donatello, but certainly duplicating in part the relief on the Castell Vitturi sarcophagus. From 1468 the sculptor is more traceable. The following year he designed the Donatellesque tomb of Giovanni Sobota in S. Domenico at Traù; it is a monument of Florentine type and shows a great advance over the artist's earlier efforts. A more important commission, almost contemporary, was the erection of the Orsini chapel at the same place. This is decorated with sculpture by Niccolò aided by Andrea Alexi and Giovanni Dalmata. Still other works of the master are found in the cemetery at Traù, a statue of the Saviour, a half-length God Father, and a relief of the Descent from the Cross. From 1477 until his death in 1500 he was engaged as architect of the cathedral at Sebenico, where he devoted himself more to architecture than to sculpture though an unfinished Entombment and various decorative pieces by him are recognized. His work owes its quality mainly to two marked tendencies, the first toward architectural composition, the second toward the further development of Donatello's last or realistic style.

The Origins of Magnasco.—In *Mh. f. Kunstw.* VIII, 1915, pp. 238–248 (13 figs.), L. PLANISCIG traces the origins of Magnasco. In contrast to the official academic art of Domenichino, Michelangelo da Caravaggio brought a certain trend toward naturalism and toward romanticism into Italian painting, but this latter movement owned its principal impetus to the Netherland painters who began to study in Italy and even influenced Caravaggio. With the seventeenth century the romantic wave, accelerated by the spread of engraving, and the love of ruins and suggestive landscape became prominent. Salvator Rosa, though a would-be classicist, was most instrumental in developing under northern influence this genre tendency with the new landscape painting. Jacques Callot signifies practically the displacement of the baroque by the rococo. A native of Genoa, where the works of Van Dyck were particularly favored, Magnasco moved toward the end of the seventeenth century to Milan, at that time infused with the Venetian and Spanish impressionistic movements and the centre of Spanish life in Italy. This life the artist portrayed, and, as the Le Nain brothers were laying the foundation of French rococo, he became representative of native Italian rococo before it succumbed

to the French. A new attribution to Magnasco is a Decolation of St. John in the Stadtmuseum, Meran, South Tyrol; other neglected works are illustrated.

Belbello da Pavia.—In *L'Arte*, XVIII, 1915, pp. 241–252, G. PACCHIONI begins the study of an illuminated missal in the Palazzo Ducale at Mantua. The codex is illuminated by two very distinct masters. The older is the same as the master of the Vatican Bible of Niccolo III d'Este. This hitherto anonymous miniaturist, a large number of whose works are known, is here identified tentatively as Belbello da Pavia. Belbello is recorded at work at the Gonzaga court in 1448 and in 1451 and a decade later he began a missal which was sent incomplete to Mantua to find eventual completion at the hands of a younger artist. This missal would tally perfectly with the one actually preserved at Mantua in date, style, and the circumstance of showing the work of two dissimilar men. Accepting this hypothesis, the Mantuan missal takes its place at the end of Belbello's activity which could be summed up as follows: before 1434, the Este Bible; about 1440, the Visconti prayer-book; slightly later, the antiphony of Cesena; and near to the Mantuan missal in date, a leaf of the Braidense (Milan) and another in a codex of 1462 in the Marciana.

A Dosso Dossi in the Boymans Museum.—In *Burl. Mag.* XXVIII, 1915, pp. 20–23 (pl.), F. SCHMIDT-DEGENER attributes to Dosso Dossi and dates about 1535 a panel painting representing on the front a satyr and a nymph, on the back an olive tree with falling fruit. On the tree is tacked a cartellino with the legend, "*Infoelix fatum cadit ah! de ramis oliva.*" This possibly connects the picture with the Olivi, Olivieri, or Olivati of Ferrara. It is now in the Boymans Museum, Rotterdam, where it already figured in the 1811 catalogue.

Nicola di Maestro Antonio of Ancona.—In *Rass. d'Arte*, XV, 1915, pp. 165–174 (pl. 9 figs.), B. BERENSON takes as his starting point the signed altar piece of 1472 in the collection of Vernon Watney, Cornbury Park, Charlbury, and attributes to Nicola di Maestro Antonio of Ancona a St. Peter at Highnam Court, a Magdalene and a St. Francis in the Oxford University gallery, a Pietà in the communal gallery at Jesi, a St. John Baptist in the Walters collection, a Madonna and Saints in the Palazzo Massimo at Rome, the Stonyhurst Madonna now owned by Sir J. B. Robinson of London, and a St. Anthony Abbot in the hands of the London dealer Nicholson. Nicola di Maestro Antonio derived from Carlo Crivelli, but shows the influence of Cosimo Tura and Marco Zoppo, and less directly of the Umbrians. The works mentioned do not show any great development, and might very well all date within a few years after the altarpiece of 1472.

A Panel by Giovanni di Paolo.—In *Burl. Mag.* XXVIII, 1915, p. 3 (pl.), T. BORENIUS publishes a panel by Giovanni di Paolo belonging to Mr. Robert Ross. The picture represents St. Fabian and St. Sebastian with two diminutive brethren of the Misericordia kneeling at their feet. Though the provenance of the picture is unknown before the present owner bought it at the sale of Mr. Charles Butler's collection at Christie's, 1911, it was apparently the altarpiece of the chapel of some charitable brotherhood dedicated to these two saints of January 20.

The Dossi.—Among the North Italian schools of painting which have recently been receiving the increasing attention of critics that of Ferrara has come into the foreground and in particular the personalities of the two Dossi

have been studied. Supplementing the criticism of Berenson and Venturi and the monograph of Mendelsohn, C. PHILLIPS in *Burl. Mag.* XXVII, 1915, pp. 133-134 (2 pls.) characterizes the two brothers. Dosso, the older, is the more animated and able creative spirit. Battista though not entirely dependent imitates him blandly and superficially. The author, who had previously published in the *Art Journal*, December, 1906, a little Pietà in his own collection as the earliest known Dosso, now gives an Adoration of the Magi in the possession of Capt. E. G. Spencer-Churchill at Northwick Park as the earliest Battista.

A New Document for Pietro Torrigiani.—In *Boll. Arte*, IX, 1915, pp. 181-192 (6 figs.), A. FERRAJOLI reviews our knowledge of Pietro Torrigiani and publishes a will made by this sculptor September 4, 1498, and preserved in the Archivio Capitolino. This new document mentions a bust of Alexander VI by Torrigiani which may be that in the Berlin museum. It also tells that the artist was then living with Stefano Coppi, rector of S. Salvatore alla Suburra, and thus opens the possibility of identifying as works of Torrigiani the three busts, the Saviour, S. Fina, and S. Gregorio, which Coppi had made for his church and later sent to his native Sangimignano, where the first is now preserved in the Collegiata, the two others in the Ospedale di S. Fina.

Florentine Miniatures.—In *Rass. d'Arte*, XV, 1915, pp. 49-58 (pl.; 12 figs.), L. DAMI abstracts D'Ancona's monumental work, *La miniatura fiorentina nei secoli XI-XVI*. From the eleventh to the thirteenth century Florentine miniatures are scarce; in the eleventh century the types are Byzantine, in the twelfth, Romanesque, but the thirteenth century loved little extravagant and lively scenes. By the second half of the fourteenth century there are three distinct styles, literary for the classics, popular for the legends of the saints, and the dominant ecclesiastical. The transition to the next century is not sudden or marked, but in the Quattrocento the individual miniaturists acquire greater importance. Zanobi Strozzi, Filippo di Matteo Torelli, and Francesco d'Antonio, lead up to the great partners Gherardo and Monte di Miniato, and the culmination at the turn of the century in Attavante degli Attavanti already marks the beginning of the decline.

Perugian Towelling.—In *Rass. d'Arte*, XV, 1915, pp. 20-24 (10 figs.), W. BOMBE lists representations of Perugian towelling in Italian painting of the fourteenth to the sixteenth century. The archival references show that this textile industry was carried on in Perugia by the guild of the *infularii et capellarii* (see *A.J.A.* 1915, p. 207).

Documents for the History of St. Peter's.—In the Beiheft to *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 21-117, O. POLLAK gives a series of selected documents for the history of St. Peter's extracted from the archives of the R. Fabrica di S. Pietro, with an appendix of similar documents from a manuscript of Giuseppe Gueriggi written at the beginning of the last century, when the archives were more complete than now.

Anonymous Italian Medals.—In the twentieth installment of his 'Notes on Italian Medals,' *Burl. Mag.* XXVII, 1915, pp. 235-242 (2 pls.), G. F. HILL figures anonymous medals, several of Ferrara and of Reggio in Emilia, two Florentine medals of which one is called Don Garcia de' Medici, a medal attributable to the Mantuan Mea, and others of doubtful provenance.

Venetian Paintings in the United States.—In *Art in America*, IV, 1915, pp.

3-21 (pl.; 4 figs.), B. BERENSON continues his study of Venetian paintings in our own collections and discusses Mantegna and Giovanni Bellini. Mantegna's *Sacra Conversazione* of the Gardner collection is dated about 1485, the Altman Holy Family of the Metropolitan Museum at the end of the artist's activity. Of Giovanni Bellini America has what is probably the earliest extant work in the Madonna of the Davis collection. Both Giovanni and his brother, Gentile, developed tardily as long as their father lived. The Johnson Madonna by Giovanni, dating about 1470, reflects Mantegna's influence.

The Choir Stalls of Pantaleone de Marchis in Berlin.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 175-188 (9 figs.), F. SCHOTTMÜLLER discusses the choir stalls of Pantaleone de Marchis in the Kaiser-Friedrich Museum and compares them with the other work of this intarsia worker in the Certosa of Pavia and in S. Petronio, Bologna. The Berlin stalls have been reconstructed so as no longer to show the original arrangement of the parts.

The Relations of Bramantino and Luini.—In *Rass. d'Arte*, XV, 1915, pp. 147-155 (10 figs.), G. FRIZZONI in a study of Bramantino rejects the theory that this artist collaborated with Bernardino Luini in the latter's frescoes for the Pelucca. The putti of this decoration attributed to Bramantino agree with Luini's drawings and pictures and their only connection with Bramantino is the lighting by reflected light from below, a trick which Luini would have delighted to imitate.

The Ehrich Tintoretto.—In *Burl. Mag.* XXVII, 1915, p. 168, G. F. HILL notes in a letter to the editors that his argument for the identification of the portrait attributed to Tintoretto in the Ehrich Galleries, New York, as a portrait of Scipione Clusona (see *A.J.A.* 1915, p. 364) is vitiated by the discovery that two other members of the family, Bruto and Agostino, are found by the archival researches of G. Castellani to have been in the Venetian military service at the same time as Scipione.

The Early Works of Leonardo.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 189-207 (10 figs.), W. v. BODE takes up anew the question of the youthful works of Leonardo and assigns to the master the Angel of Verrocchio's Baptism, the Louvre and Uffizi Annunciations, the Benois and Munich Madonnas, the Liechtenstein portrait, and the Berlin Resurrection; he defends Leonardo's authorship of the Czartoryski Girl with the Weasel (ferret or ermine).

Bernardino Lanzano.—In *Rass. d'Arte*, XV, 1915, pp. 91-96 (5 figs.), E. FERRARI summarizes what is known from documents and pictures of the development of the obscure but prolific fifteenth century Lombard, Bernardino Lanzano, who was at his own time rightly dubbed a good decorator and painter of stories.

A Fresco Fragment by Pinturicchio.—In *Mh. f. Kunstw.* VIII, 1915, pp. 337-338 (fig.), W. BOMBE discusses the only preserved fragment of Pinturicchio's fresco decoration for the chapel of S. Lorenzo in S. Maria del Popolo, Rome. This piece represents the Madonna Enthroned and was transferred to the Massa Cathedral when the Roman chapel was rebuilt at the end of the seventeenth century.

Ercole Ferrarese.—In *Rass. d'Arte*, XV, 1915, pp. 191-198 (10 figs.), C. GAMBA studies the picture recently added to the Bologna gallery, the copy of the perished fresco of the Crucifixion that was painted by Ercole Ferrarese in the Garganelli chapel in S. Pietro, Bologna, and made famous by the enthu-

siastic description of Vasari. By comparison with this copy and with other originals of Ercole, the St. Sebastian of the Pitti is assigned to him, and a painting of Figures before a Portico in the Louvre is identified as the copy of a part of the fresco of the Death of the Virgin in the Garganelli chapel.

The Arezzo Gallery.—In *Rass. d'Arte*, XV, 1915, pp. 75–88, 110–120 (35 figs.), A. DEL VITE discusses in chronological order the pictures of the hitherto uncatalogued municipal gallery at Arezzo.

A Triptych of Allegretto Nuzi in Detroit.—In *Art in America*, IV, 1915, pp. 213–222 (3 figs.), C. R. POST studies a triptych by Allegretto Nuzi in the Detroit Museum of Art. The painting illustrates the early period of the artist and shows his schooling. It reflects on the one hand the composition of a triptych by Nuzi's master, Bernardo Daddi, in the possession of Dr. Giulio Ruozzi, Spello, Italy; on the other hand it has the decorative quality and the ethereal figures of the Trecento Sienese. To these influences the artist adds his own opulence, which in later works as in the Bishop-Saint of Mr. Horace Morison, Boston, passes into a grandiose ecclesiasticism akin to Byzantine formalism and the early Venetians.

Luciano da Lauranna as Painter.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 208–214 (5 figs.), F. WITTING attributes to the architect, Luciano da Lauranna, who is known to have painted views with figures, two pictures in the Palazzo Barberini, Rome. The figure subjects on a small natural scale in the midst of a Renaissance architecture represent the Birth and Presentation of the Virgin.

The Frescoes in the Piccolomini Library.—In *Mh. f. Kunstw.* VIII, 1915, pp. 202–214, R. WEST gives a detailed description of the frescoes of Pinturicchio in the Piccolomini library at Siena.

Sassoferrato as Imitator.—In a supplementary study of Sassoferrato, the painter's biographer, G. VITALETTI (*Rass. Bibl. d'Arte Ital.* 1915, p. 64), records the copies and adaptations of earlier paintings made by this eclectic artist, who devoted his attention particularly to the reproduction of the works of the Venetian and Umbrian schools and took Titian as his master in the one case, Raphael in the other.

Notes on Italian Sculpture.—In *Burl. Mag.* XXVII, 1915, pp. 217–224 (2 pls.), C. PHILLIPS denies the attribution of the Mucius Scaevola in the Wiesbaden museum and the related Roman Warrior of the Collection Jacquemart-André at Paris to Agostino Busti (Il Bambaja) because of their dissimilarity to his reliefs for the unfinished tomb of Gaston de Foix of approximately the same date. In a second note the writer tentatively attributes a terra-cotta relief of the Victoria and Albert Museum, Cupid Unveiling a Sleeping Nymph, to Benvenuto Cellini and compares it to the Nymphe de Fontainebleau of the Louvre.

Italian Paintings at Cracow.—In *Rass. d'Arte*, XV, 1915, pp. 1–4, 25–29 (2 pls.; 8 figs.), M. L. BERENSON lists briefly under artists' names and schools Italian paintings of the Czartoryski, Puslowski, Potocki, and Lubomirski collections at Cracow.

Early Italian Engravings.—A catalogue of a collection of early Italian engravings exhibited in the Fogg Art Museum of Harvard University in memory of the late Mr. Francis Bullard has been prepared by the Assistant Director of the Museum with the help of Miss Laura H. Dudley. Introductions,

bibliographies, and descriptions are appropriate and carefully done. The collection forms "probably the most representative exhibition ever held in this country of original impressions of early intaglio Italian engravings made prior to the crystallization of Italian technique by the prolific Marcantonio Raimondi." It includes three nielli, several anonymous primitive Florentine engravings in the fine manner, the Otto Prints, a number of engravings from books, the Triumphs of Petrarch, miscellaneous works, prophets, and sibyls in the broad manner, two engravings by Pollaiuolo, five by Cristofano Roberta, the "Tarocchi Cards," engravings of miscellaneous and uncertain schools, engravings by Mantegna and his school, by Giovanni Antonio da Brescia, Zoan Andrea, Jacopo de'Barbari, Girolamo Mocetto, Benedetto Montagna, Giulio and Domenico Campagnola, Jacopo Raibolini (Francia), and several engravers not known by name, and one each by Peregrino da Cesena and Nicoletto da Modena. [PAUL J. SACHS, *A Loan Exhibition of Early Italian Engravings (Intaglio)*. Fogg Art Museum. Cambridge, 1915, Harvard University Press. 357 pp.; 134 illustrations. 4to.]

Two Bronze Reliefs of the Choir Screen in the Abbey of Chiaravalle.—In *Rass. d'Arte*, XV, 1915, pp. 175–179 (4 figs.), L. BELTRAMI calls attention to two round bronze reliefs which once formed a part of the choir enclosure of the church of the abbey of Chiaravalle near Milan. The other decorations used in that construction in 1571 were taken from earlier monuments, and, moreover, the style of the bronze reliefs would seem to date them at the beginning of the century. They represent the Doubting Thomas and the Descent into Limbo and may be units of a Christological series.

Notes on Luca Della Robbia.—In *Burl. Mag.* XXVIII, 1915, pp. 3–7, H. P. HORNE writes a series of notes on Luca della Robbia apropos of the recent Princeton Monograph of Professor Marquand. Apart from minor differences of the attribution of school pieces, Horne would in general set many points in the chronology of Luca somewhat later. The Pistoia Visitation shows the influence of the high Renaissance, of Leonardo, and cannot, therefore, be the Visitation referred to in the will of 1445. The Via dell'Agnolo lunette is also a late work of about 1470 for that was the time of the founding of the little church over the door of which it was placed. The date at which Luca perfected the method of making colored glazed terra-cottas is about 1440 in round numbers; previously he is always mentioned as employed in marble sculpture. Contemporary literary sources prove that Vasari's interpretation of the fourth and fifth campanile reliefs by Luca is incorrect and that the fourth represents Orientals for Arithmetic, the fifth, Pythagoras for Astrology. New documents here published give the matriculation of Luca in the *Arte di Maestri di Pietre e Legnami*, September 1, 1432; show that both he and Andrea belonged to the Compagnia di San Luca; give the correct date of the commission of the Federighi monument in S. Trinita as May 2, 1454 with the additional and curious information that it was to be done after the design of an obscure Giovanni di Ser Paolo; and fix the date of his death, February 23, 1481.

Two Ferrarese Drawings.—In *Boll. Arte*, IX, 1915, pp. 1–12 (7 figs.), G. FRIZZONI reviews the third part of Venturi's seventh volume and adds to the material on the Ferrarese school there presented a drawing of An Ancient Sacrifice by Ercole Roberti in the Loeser collection, Florence, and another drawing of the same title by Francesco Francia in English private possession.

S. Anastasia, Verona.—In *L'Arte*, XVIII, 1915, pp. 296–304 (4 figs.), C. CIPOLLA continues his historical researches concerning S. Anastasia at Verona and studies the side chapels with their monuments and inscriptions (see *A.J.A.* 1915, p. 497).

Sibyls in Italian Art.—In *L'Arte*, XVIII, 1915, pp. 272–285 (10 figs.), A. ROSSI continues the study of the iconography of the sibyl in Italian art (see *A.J.A.* 1915, p. 490). One of the eight female figures (the other seven are virtues) which adorn Nicola Pisano's pulpit in the Siena cathedral is identified as a sibyl, the first one of which we know the master. In Giovanni Pisano's sibyl on the facade of that cathedral a sibylline prophecy, "*Et vocabitur Deus et homo*," appears in abbreviated form on the scroll. The six sibyls of Giovanni's pulpit in S. Andrea, Pistoia, show that more than two were known long before the publication of Lattanzio and of Filippo de Barberiis in the late fifteenth century. Even the ten of Agostino di Duccio in S. Francesco, Rimini, antedate that publication though apparently the literary basis is Lattanzio. Mâle errs, then, in attaching importance to the date of the publication of Lattanzio, since the work seems to have been well known before.

The Jarves Collection.—In *Art in America*, III, 1915, pp. 273–283 (4 figs.), O. SIRÉN discusses and gives his attributions of the earliest pictures in the Jarves Collection at Yale University. No. 1, three panels from an altarpiece, representing Crucifixion, Deposition, and Pietà, is assigned to Bonaventura Berlinghieri, a painter of Lucca who is known by a signed altarpiece dated 1235 in S. Francesco in Pescia. No. 11, a Crucifixion hitherto labelled Giunta da Pisa, is attributed to Guido da Siena, whose famous signed Madonna in the Palazzo Pubblico, Siena, bears a contested date, more likely 1271 than 1221. To Guido also are attributed Nos. 5, 7, 15, 16, and 587 of the Siena Academy, a Madonna under the name of Coppo di Marcovaldo in the Uffizi, and another in the gallery at Arezzo. The picture in the Jarves Collection which was formerly assigned to the studio of Cimabue (No. 13) is attributed to a follower of Giunta da Pisa, Deodato Orlandi, the painter of a signed crucifix of 1288 in the Lucca gallery and of two Madonnas in the Museum at Pisa, of which one is signed and dated 1301. Finally the picture (No. 12) which has borne the name of Margaritone d'Arezzo is recognized rather as a studio piece by that pupil who painted No. 99 of the Florence Academy and a Madonna formerly in the hands of the dealer Miethke at Vienna.

Ghirlandajo's Drawings.—In *Mh. f. Kunstw.* VIII, 1915, pp. 293–295 (2 figs.), P. E. KÜPPERS denies to Ghirlandajo the Leonardesque drawings attributed to him by Wickhoff, Nos. 420, 433, 434, 437, of the Uffizi, and the drapery study in the Louvre (Braun 180). No. 434 is Granacci's study for St. Jerome in his Berlin altarpiece. The likeness of the Uffizi drawing No. 431 to the Madonna of the Sassetti altar is not such as to support its attribution to Ghirlandajo. On the other hand No. 441 is surely a study for the Madonna of the 1485 Adoration. The interesting connection of Ghirlandajo to the atelier of Verrocchio is evidenced by No. 432, which bears on one side a study by Ghirlandajo for the Child of the Pisa Madonna and on the other a drawing of some pupil of Verrocchio, perhaps Credi.

SPAIN

Don Baltasar Carlos by Velazquez.—In *Burl. Mag.* XXVIII, 1915, pp. 56-60 (pl.), L. CUST discusses the portrait of Don Baltasar Carlos sent to England in 1639 when the Spanish heir-apparent was a candidate for the hand of Mary, the oldest daughter of Charles I, and now preserved in Buckingham Palace. A recent cleaning has removed the heavy varnish and discoloration which formerly obscured the stroke of Velazquez.

Painters to the Kings of Spain.—In *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 132-146, 206-224, F. J. SÁNCHEZ CANTÓN continues his catalogue of the painters to the chamber of the kings of Spain with the discussion of the late seventeenth century painters of the Austrian house and the fifteenth century painters of the Bourbons.

Sixteenth Century Art in Huesca.—In *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 189-197 (2 pls.), R. D. ARCO concludes his series of unedited documents on the art of Huesca in the sixteenth century with considerable material for the obscure painter Tomás Peliguet, a follower of Baldassare Peruzzi and Polidoro da Caravaggio and highly esteemed at his time.

Hernando Yáñez de la Almedina.—In *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 198-205 (4 pls.), E. TORMO writes an enthusiastic criticism of the early sixteenth century Leonardesque painter Hernando Yáñez de la Almedina, whom he calls the most exquisite painter of the Renaissance in Spain.

Spanish Pictures in American Collections.—In *Art in America*, III, 1915, pp. 309-320 (4 figs.), and in *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 104-108 (4 pls.), A. L. MAYER discusses the Spanish pictures in America with many attributions. Twenty-seven authentic works by Greco, ten by Velazquez, and four by Murillo have crossed the Atlantic; but there are paintings by less celebrated artists as well. The portrait of a nameless lady in red at the Worcester Art Museum is assigned to Bartolomé González instead of Coello. No. 810 of the Johnson collection is not Spanish but Flemish. In the Boston Museum of Fine Arts the Crowning of Thomas is a Ribera dating from 1630-1640; the Geographer to be a Ribera must be a late work; but the St. Sebastian Cured by St. Irene is surely an imitation by Luca Giordano. Vice versa, the Philadelphia St. Sebastian Cured by St. Irene is an authentic Ribera, the Geographer Giordano's copy. The Lucretia attributed to Ribera in the Metropolitan Museum is by Massimo Stanzioni. A head of a priest belonging to Mr. W. F. Cook, of Pittsburgh, is a fragment from Ribera's celebrated picture of the Triumph of Bacchus, painted 1630-35, the greater part of which perished in one of the conflagrations in the Alcázar of Madrid. Some few heads, rescued from the charred canvas, are preserved in the Prado. A finer work by Ribera is the St. Paul in the possession of Mr. Archer M. Huntington, New York. Juan de Ruelas, the founder of the national Sevillian school, is not represented in America, but there is a fine genre Interior by Francisco Herrera the Elder owned by Eugen Boross, Larchmont, N. Y. The few pictures by Murillo in this country are of unusual importance. The young St. Thomas of Villanueva Distributing his Raiment among Little Beggar Boys which belongs to Mrs. Emmery, Cincinnati, is the consummate example of Murillo's genre painting. The male portrait owned by Sir William van Horne,

of Montreal, is excellent. The Girls at the Window in the Widener collection is full of humor. The male bust portrait in the Hispanic Museum, New York, is a genuine Murillo, but the Coronation of St. Francis there is a copy by Tobar of the larger original in the Seville museum. The Martyrdom of St. Stephen in the Boross collection mentioned above is not by Murillo, but by Pablo Legote. False attributions to Velazquez are the Philip IV in the Boston museum, the Satyr and Peasant by Bernardo Strozzi and the Borrachos in the Widener collection, and the Knight of Santiago by Mazo in the possession of Mr. William P. Douglas, New York. But the Infante Don Baltasar Carlos of 1631 in the Boston museum is an important and genuine example of the master. Antonio de Puga is represented by the Antiquarian of Mr. Archer M. Huntington and the Old Woman of Mr. St. Bourgeois; Carreno by the Charles II of the Hispanic Museum, which is earlier than the similar picture in the Museo del Greco, Toledo, Spain, and to be identified with the picture sent to France in negotiating the marriage with this king's first wife, Doña Maria Luisa de Orleans.

El Greco and the Antique.—In *Boletín de la Sociedad Española de Excursiones*, XXIII, 1915, pp. 89–103 (8 pls.; fig.), J. RAMÓN MÉLIDA discusses the relations of El Greco to the antique and finds that, while he was entirely free from the classic tradition as expressed in sculpture, the ancient portrait style as known from the Fayum, had been passed down through Byzantine channels and along with Byzantine compositions moulded El Greco's art.

FRANCE

Quentin Varin.—In *Mh. f. Kunstw.* VII, 1915, pp. 274–278 (2 figs.), O. GRAUTOFF gives a résumé of all that is known of Poussin's teacher, Quentin Varin. This artist was born at Beauvais about 1570, studied under local painters and later was an apprentice at Avignon, whence his earliest known picture, a Madonna with the signature, "Varin pinxit 1600." He settled at Amiens, but commissions took him to Les Andelys, where he became the master of Poussin and left in Notre Dame three signed pictures, two dated 1612. From 1616 he lived with varying fortunes in Paris, finally he became *Peintre du Roi*, 1623. He died probably in 1627, surely before 1629. His early work at the time he was Poussin's teacher is his best, for he better understood the conservative style out of which he grew than the decorative baroque style which he attempted to imitate. Poussin expressed great regard for Varin, but no works preserved show traces of Varin's influence on his pupil.

The Missal of the Sainte Chapelle.—In *R. Arch.*, fifth series, II, 1915, pp. 37–65 (25 figs.), J. BIROT and J. B. MARTIN describe and discuss a missal in the Trésor de la Primatiale at Lyons. The miniatures, finely executed, represent scenes from the New Testament and the lives of the saints. The borders of vines and the like are unusually fine. The names of saints show that the missal was made for a Parisian church, and other indications prove that the church was the Sainte Chapelle. The style of the writing and of the miniatures fix the date at the end of the thirteenth or in the fourteenth century.

BELGIUM AND HOLLAND

Flemish Tomb Pictures.—In *Art in America*, III, 1915, pp. 261–272 (pl.; 3 figs.), F. J. MATHER, JR., publishes three early Flemish tomb pictures in Ameri-

can collections and calls attention to the fact that nearly all the familiar early paintings which show a donor, in bust or half-length, with a patron saint, both invariably of portrait type, were originally pictures of mortuary destination. They are generally the donor panel, not a wing of a triptych, as often erroneously described, but of a diptych, folded over a half-length Madonna. A complete example of the type is published from the Fogg Museum. The left panel is a Madonna attributed to Rogier de la Pasture. The right represents the donor Joos van der Burg (died 1496) and his patron St. Jodoc, and has the arms and funeral inscription of both the donor and his wife on the back; it is assigned to Gerard David. The fact that the two panels were painted separately is attested not only by the style but also by the circumstance that the donor panel had to be cut down appreciably to fit its companion. The second example of the type to be published is a panel recently added to the Johnson collection and representing a Prelate with St. Jerome. In this case the donor panel—the other panel is not known—is the left one; that speaks for France rather than Flanders, and it is, therefore, attributed to the Tournai school, specifically to Jacques Daret. The picture is too early to allow the formerly suggested identification of the donor as Jerome Bursleiden. The third painting published is in the possession of Mr. Philip Lehman, New York. It represents Anna de Blasere (died 1480) with the Madonna and St. Anne and has the funeral inscription of the donor on the back. The style of the painting allows the definitive attribution to the Master of the St. Ursula Legend. This painting was probably set up on one side of a carved crucifix pendant to another panel; it does not then form an example of the particular class of tomb pictures to which the preceding examples belong. A sixteenth century French portrait panel of a donor with patron in the Worcester Art Museum is possibly a mortuary picture, but its arched form is more that of the side piece of a triptych without shutters.

Dutch and Flemish Drawings in the Metropolitan Museum.—The drawings by Dutch and Flemish artists in the Metropolitan Museum are treated by G. S. HELLMAN in *The Print Collector's Quarterly*, V, 1915, pp. 369-396 (12 figs.).

Rembrandt's Amsterdam.—In *The Print Collector's Quarterly*, V, 1915, pp. 109-169 (plan; 27 figs.), F. LUGT gives under the title of 'Rembrandt's Amsterdam' an English version of that part of his book, *Wandelingen met Rembrandt in en om Amsterdam*, which is of interest to students of the reproductive arts.

Rembrandt's Drawings.—In *Z. Bild. K.* XXVI, 1915, pp. 213-216 (pl.), M. J. FRIEDLANDER offers a general criticism of Rembrandt's drawings and indicates that the artist found himself earlier in his career in these less pretentious works than in his more ambitious undertakings, and that the drawings reflect characteristics not different but supplementary to those of the paintings.

Notes on Gonzales Coques and Assistants.—In the thirty-second installment of 'Notes on Pictures in the Royal Collections' (*Burl. Mag.* XXVII, 1915, pp. 150-158; 3 pls.), L. CUST and F. J. VAN DEN BRANDEN show that it is not the painting of a picture gallery at the Mauritshuis, The Hague, but another Picture Gallery in the royal collection at Windsor which was presented by the Guild of St. Luke to the advocate Jean van Bavegem. The identification rests on the representation of the advocate and of members of the guild in

the Windsor picture. The man in the Hague painting is presumably the proprietor of the collection. In both paintings the architecture is by Wilhelm Schubert von Ehrenberg, a German resident of Antwerp, the individual paintings by various Antwerp artists, and the figures by Gonzales Coques. Coques and Ehrenberg finished their task in 1674 though the picture was not completed and presented till 1683. However successful Coques was as a painter of small figures and portrait groups, he was a failure in large compositions. Commissioned in 1647 by the Prince of Orange to furnish ten large pictures of the Legend of Psyche, he was obliged to call secretly upon his fellow-painter Abraham van Diepenbeck for composition sketches. The latter furnished them at a reasonable price by plagiarizing Raphael. Coques carried out these compositions, only to be accused of stealing from Raphael. In revenge on Diepenbeck he refused him his pay and in the litigation that followed the whole odious affair became public.

Jan Boeckhorst.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 162-174 (6 figs.), R. OLDENBOURG defends the old view of Reber that the upper part of Rubens' small Last Judgment in the Munich Pinakothek is the later addition of a pupil. This pupil is identified as Jan Boeckhorst, who is responsible for the retouching and enlarging of the Erlangen Assumption of the Blessed, the central part of which still retains Rubens' original design. To the same artist are attributable some further imitations of Rubens: the Fall of the Damned in the Aachen museum, the Last Judgment in the Dresden gallery (No. 958A), the Last Judgment engraved by Rosaspina, a little Fall of the Damned in Budapest (No. 599), and a Pan and Syrinx in Buckingham Palace. Other pictures which may eventually be also by Boeckhorst are the Félène Fourment from the Weber collection now in the Brussels museum, a Family at Windsor, a female portrait in the gallery at Darmstadt (No. 190), a portrait of a youth in the Munich Pinakothek (No. 865), and a Falconer in Buckingham Palace.

Van Dyck's Etchings and Iconography.—A detailed study of Van Dyck's twenty-one etchings and an account of that series of engravings of princes and military commanders, statesmen and philosophers, artists and amateurs, known as the Iconography, is given by A. M. HIND in *The Print Collector's Quarterly*, V, 1915, pp. 1-37, 220-253 (39 figs.).

The Monforte Altarpiece of Hugo van der Goes.—In *Z. Bild. K.* XXVI, 1915, pp. 221-230 (pl.; 11 figs.), A. GOLDSCHMIDT studies the Monforte Altarpiece of the Kaiser-Friedrich Museum. The appearance of its lost wings can be reconstructed inadequately from the two copies of the altarpiece by a Frankfurt master; of these copies that in Antwerp more nearly reproduces the type of composition that is known as Hugo's, that of Vienna gives a very curtailed variation of the Circumcision panel and entirely departs from its model in the panel of the Nativity. Neither the date of these copies nor that of the influence of this and of Hugo's other works on Geertgen tot Sint Jans gives a basis for fixing the date of the Monforte Altar. On stylistic grounds it would seem to belong to the period about 1470, when the artist was eagerly studying earlier masters and had not yet come under the influence of Dirk Bouts.

A Drawing by Barend van Orley.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 223-230 (2 pls.; 4 figs.), L. v. BALDASS discusses the stylistic relations of Mabuse and Barend van Orley and attributes to the latter a composition

drawing for an Adoration which has hitherto borne Mabuse's name in the Louvre.

The Perspective of the Ghent Altarpiece.—In *Mh. f. Kunstw.* VIII, 1915, pp. 198–201 (8 figs.), R. JOSEPHSON offers an explanation of the low viewpoint in eight sections of the Ghent Altarpiece. The altarpiece shows strong influence of the sculpture of Claus Sluter and especially of the figures of the portal of Champmol. Jan van Eyck in sketching from below this sculpture as it must actually have appeared to him would have come upon the illusionistic low viewpoint even though his theoretical knowledge of perspective was slight and this low viewpoint was not scientifically mastered before Mantegna.

GERMANY

Dürer in the Vischer Studio.—In *Mh. f. Kunstw.* VIII, 1915, pp. 366–370 (8 figs.), H. STIERLING points out the influence of Dürer over the Vischer workshop. Peter Vischer the Elder's grave tablet for Kmitas in the cathedral at Cracow shows direct imitation of the St. Eustachius and St. George of the Baumgärtner Altar. Dürer's drawing of 1513 for Vischer's Römhilder or Hechinger monument is well known and no longer to be set aside on the basis of date. The Christ of the epitaph of Margarethe Tucher, probably by the younger Vischer, imitates Dürer's Life of Mary, B. 92, the scene of Christ's Departure from His Mother. Dürer's engraving of Adam and Eve of 1504 had a controlling influence on both the renderings of Orpheus and Eurydice by the younger Vischer (Fig. 9), as well as some bearing on other of his works, the Romulus and Remus plaque, the Stanmore and Oxford ink wells, and the relief of the Healing of the Blind on the monument of St. Sebald. The Louvre has a folder of little-studied drawings by the younger Vischer, which show his relation to Dürer.

Hans Burgkmair's Genealogy of Maximilian I.—In the Beiheft to *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 1–20, H. ZIMMERMANN publishes a catalogue of the extant trial proofs of Hans Burgkmair the Elder's series of woodcuts of the genealogy of Emperor Maximilian I, complete except for the recently found series in the Ashmolean Museum, Oxford (see *A.J.A.* 1915, p. 503).

Martin Schaffner as Medallist.—In *Jb. Preuss. Kunsts.* XXXVI, 1915, pp. 153–161 (pl.; 2 figs.), G. HABICH groups ten examples of the work of an anonymous medallist whom he calls the Beltzinger Master, because several of the medals represent members of the Beltzinger family. The people portrayed and the provenance of the known medals point to Swabia, precisely to Ulm. One of the medals shows a man in working clothes and is marked, "MDXXII EFFIGIES M.S.M. XLIII." Since the dates fit, the M.S.M. may be read Martin Schaffner Maler; this form of signature was common at the time and used elsewhere by the artist in question.

Middle High German Poetry on Fifteenth Century Tapestries.—In *Jb. Kunsth. Samm.* XXXII, 1915, pp. 233–253 (pl.; 12 figs.), B. KURTH identifies the subjects of two fifteenth century woven tapestries by referring them to Middle High German poetry. The first of these, illustrating *Der Buzant*, is reconstructed incompletely from four fragments, one in the South Kensington Museum, another in the collection of W. Clemens at Munich, a third in the Figdor collection at Vienna, and a fourth in the Nationalmuseum at Nurem-

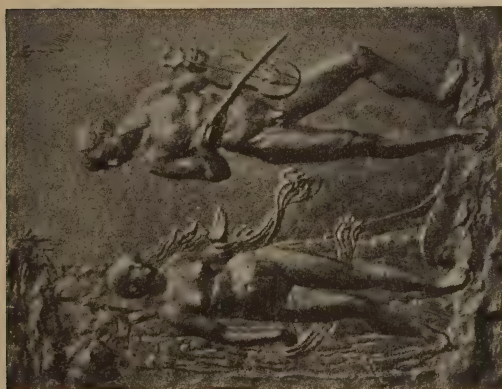


FIGURE 9.—DÜRER'S ADAM AND EVE; ORPHEUS AND EURYDICE BY THE YOUNGER VISCHER

berg. Of the second tapestry, representing the story of the Queen of France and the Faithless Marshall, only a piece in the Nuremberg museum is known. Both tapestries follow their Alemannic literary prototypes very closely and with a third piece of tapestry in the Vienna Hofmuseum can on stylistic, dialectic, and heraldic evidence be traced to an Alemannic, perhaps Alsatian origin.

The Lovers by Israhel van Meckenem.—In a note in *Burl. Mag.* XXVII, 1915, p. 248 (pl.), C. DODGSON differentiates the five states of Israhel van Meckenem's engraving, *The Lovers*, after the Master of the Hausbuch. The states had previously been described as three.

Early German Woodcuts.—A brief account of the progress of German wood engraving through the fifteenth century is given by E. H. RICHTER in *The Print Collector's Quarterly*, V, 1915, pp. 340-362 (8 figs.).

Two Drawings by Dürer in the British Museum.—In *Burl. Mag.* XXVIII, 1915, pp. 7-14, 49 (3 pls.), C. DODGSON publishes two new Dürer drawings recently acquired by the British Museum. One, representing *Knights Riding and Tilting*, is dated 1489; it has a study for a knight's head on the reverse. The other is a *Costume Study*. Both were purchased at the Ginsburg sale at Sotheby's, July 20, 1915. The former can be traced back to the possession of Sir Thomas Lawrence, the latter to the Mariette and Wellesley collections.

GREAT BRITAIN

The Development of Table Designs.—In *Burl. Mag.* XXVII, 1915, pp. 189-193, 231-235 (2 pls.; 5 figs.), B. OLIVER traces the development of English table designs of the sixteenth and seventeenth centuries. The earlier trestle tables with detachable tops and occasional round tables began to be replaced about the middle of the sixteenth century by framed tables with legs connected by stretchers near the bottom, sometimes draw-tables. Under continental (Flemish) influence the legs became in the next century very bulbous and over-balustered. This type was soon replaced by the ordinary gate-leg table. But already the slenderer type had been developed in Italy and along with other classical reminiscences it spread to France in the sixteenth, and to England in the seventeenth century.

Shakespeare's Mask.—In *Mh. f. Kunstw.* VIII, 1915, pp. 279-292 (fig.), P. WISLICENUS defends the thesis which he has often maintained that the famous death mask of Shakespeare is authentic.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

The Cross in Ancient America.—In the *Annual Archaeological Report of the Ontario Provincial Museum* (Toronto, 1914, pp. 26-43; pl.; 10 figs.), W. R. HARRIS brings together numerous examples of the occurrence of both the swastika and the true cross in America. It is inferred that the presence of the cross in both the New and Old Worlds indicates a far-reaching and very ancient cross cult.

Material Culture of West Greenland Eskimo.—In *Arbejder Fra Den Danske Artistiske Station Paa Disko* (Copenhagen, 1915, pp. 113-250; pl.; 66 figs.), M. P. PORSILD presents a very thorough technological investigation of

the weapons and implements of the West Greenland Eskimo. The subject is treated under the following heads: weapons (harpoons, darts, spears, arrows, lances), nets, shooting screens, drags, drills, knives, lamps, and toys. As in other studies of Eskimo culture, the extraordinary ingenuity of the people and their adaptability to their environment, are brought out. It is concluded that the culture of the region is essentially a unit; regional forms, where they occur, are due to the exigencies of the environment or of the raw materials rather than to influences from other civilizations.

Effigy Pipes from Ontario.—In the *Annual Archaeological Report of the Ontario Provincial Museum* (Toronto, 1914, pp. 44–71; 4 pls.; 26 figs.), G. E. LAIDLAW describes lizard effigy pipes. There are two types: stemless and stemmed. They are generally made of light-gray steatite or limestone and are distinguished from other types of effigy pipes by the presence on the exterior of the bowl of lizard effigies, the tail of the reptile running down underneath the bowl. They are presumably of late date, their manufacture possibly extending into the historic period. While no tribe is definitely known to have made them, there are certain indications that they may have been the product of the Huron-Iroquois. In the same publication (pp. 80–88) there are figured and briefly described pipes, “bird-stones,” ceremonial objects and bone implements, recent archaeological acquisitions of the Ontario museum.

Ceremonial Rooms of the Cliff-dwellings.—In *Amer. Anthr. N. S. XVII*, pp. 272–282 (2 pls.; 3 figs.), B. CUMMINGS discusses the kivas or ceremonial rooms of the San Juan Drainage in Utah and Arizona. The chambers are of two kinds: circular, and square. The former are an early type, probably derived from the circular dwelling houses of a lower stage or culture. The square kivas are presumably late, because they occur in ruins still remembered in Navajo tradition. That circular forms of enclosure other than true kivas were associated in the minds of the cliff-dwellers with ceremonial observance, is believed by Professor Cummings to be proved by the finding of ceremonial deposits in caves of circular shape.

New Mexican Pottery.—In *Mem. Amer. Anthr. Assoc. II*, pp. 409–462 (14 pls.; 11 figs.), A. V. KIDDER describes the pottery of the Pajarito Plateau, N. M. The wares are divided into four groups: black-and-white; Agua Fria; Frijolito; Pajaritan. The range of each group is discussed; the archaeology considered; and the designs, to some extent, are analysed. It is suggested that the four types follow each other in time in the order given above.

Nebraska Crania.—In *Amer. Anthr. N. S. XVII*, pp. 529–534 (7 pls.; 6 figs.), C. W. M. POYNTER studies a series of over one hundred skulls taken from graves near Omaha, Nebraska. Several groups are considered and it is concluded that, while there is no evidence of great antiquity, and no reason for supposing that the remains are other than Indian, the crania in all probability represent several well-marked tribal groups. As the Plains region, where these skulls were found, has no natural barriers in any direction, their resemblance to other American types is not to be wondered at.

An Early Mayan Pottery Head.—In *Man*, XV, 1915, p. 129 (pl.), T. A. JOYCE reports on a pottery head recently acquired by the British Museum. It is moulded by hand of coarse buff-colored clay and is probably a fragment of an incense burner. The flattened head, the eye-structure and variout

added ornaments show it to be early Mayan and the face is tentatively identified as that of "God D" or the "Roman-nosed God" of the Codices.

Figurine from Tampico.—In *Bull. et Mém. Soc. d'Anthr. de Paris*, V, 1914, pp. 180–181, FÉLIX REGNAULT describes a small figurine (Musée d'Annecy) which shows graphically the method employed in producing the well-known Maya type of head-deformation. A seated woman holds a child in her lap and presses its head between two hard, flat objects. While the early chronicles often described this process and its results are to be seen in many sculptures, this is the only pictorial representation of it that has yet come to light.

Archaeology of Salvador.—In *Amer. Anthr. N. S.* XVII, pp. 446–487 (3 pls.; 30 figs.), H. J. SPINDEN collects material for a preliminary classification of the archaeology of Salvador. Five periods are recognized. The oldest or Archaic Period is represented by crude clay figurines made by adding anatomical and ornamental details to a gross framework. The pottery takes the form of tripod jars and jugs with plastic ornament in a style suggesting that of the figurines. This archaic culture is very widely spread, being found in the Highlands of Guatemala, and the Mexican Plateau. In distribution it roughly corresponds with the present range of Nahuatl speaking people. The Maya Period of Salvadorean culture shows, as the name implies, strong influence from the Maya culture of Guatemala and Southern Mexico. It is represented by figurines of much finer workmanship and by painted tripod vases of cylindrical shape. The latter bear painted decoration that is typically Mayan; some recognizable Mayan gods appear. The next two periods: the Transitional, and the Post-Maya, represent at first a general decline in artistic ability, although in the Post-Mayan Period there appears very fine semi-glazed pottery with ornamentation by incising and modelling. The last period, the Aztec, is very strongly Mexican, influence from the North being seen in modelling, carving and painting. The archaeology of Salvador is closely connected with that of Nicaragua and Costa Rica to the south; and to that of the Maya and Nahuatl regions to the north. Stratified deposits, therefore, wherever they may be found in Mexico or Central America, may be expected to throw valuable light on archaeological problems at considerable distances from the localities in which they are discovered.

Types of Machu Picchu Pottery.—In *Amer. Anthr. N. S.* XVII, pp. 257–271 (pl.; 12 figs.), HIRAM BINGHAM classifies by shape the pottery of Machu Picchu, Peru. Wherever the analogies are close enough he borrows from the nomenclature of classical archaeology such terms as aryballus, pithos, etc. The commonest types found are the aryballus, beaker-shaped olla, pot-cover, two-handled dish, pelike-shaped jug, deep ladle and jug. All these forms belong to the later or Inca style. Certain rarer types appear to be products of an earlier period.

Peruvian Textiles.—In *Anthr. Papers of the American Museum of Natural History* (XII, pp. 55–104; 16 figs.), M. D. C. CRAWFORD presents a technological study of the textile fabrics found in the cemeteries of coastal Peru based on the collections in the Museum. The fabrics are analysed in the same way as are modern loom products; according to the weave or manner in which the design is produced; the nature and twist of the yarns; and the chemical properties of the dyes. The fibres employed were: cotton, wool and bast; spun with a whorled spindle into yarns of most extraordinary fineness. Dying was

done direct without the use of a mordant. The hand-loom only was used in weaving yet the fabrics have never been surpassed in any country at any period. The most notable manufactures were tapestries, the best of which were nearly twice as fine (in number of warps to the inch) as Gobelin tapestry. Other weaves and tricks of weaving are described in detail, as well as weaving tools and methods of using them. It is stated that the Peruvians independently produced practically every kind of textile technique and decoration known at the present day.

Amazonian War Trophies.—In *Bulletin of the Buffalo Society of Natural Sciences*, XI, 1915, (2 pp.; 2 pls.), are described two head-trophies from the Amazon. One is a shrunken human head collected from the Jivaro Indians. The preparation consisted of removing the skull and brains through the severed neck, and shrinking the skin by means of hot sand and astringents, care being taken to preserve the contours of the features. A thorough smoking completed the process. The Mundrucu head was preserved lifesize; it has been smoked and the eye-sockets filled with ornamented balls of crude rubber.

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HEAD OF HELIOS FROM RHODES



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[PLATES VII-VIII]

THE island of Rhodes was a centre of literary, commercial, and artistic activity during the centuries immediately preceding the christian era. In her cities flourished schools of rhetoric and poetry, and the art of sculpture bloomed. Dr. Blinkenberg and Dr. Kinch, the Danish excavators, found at Lindus, inscribed on statue bases and on other dedications, the names of no less than seventy-four different artists,¹ but little was learned of their artistic achievements. Successive conquerors often destroyed what they could not remove and passing centuries wrought their usual wreck. Apart, therefore, from some literary references, and several statues found in Italy,² attributed to the Rhodian school, there has been scant record of the stylistic character of the productions of this fecund period of artistic creation; consequently every bit of sculpture out of Rhodes itself is eagerly welcomed as a possible relic of an important school, and must receive careful study and consideration. Freiherr Hiller von Gaertringen, after visiting and sojourning in the island, was instrumental in the publication of several specimens of sculpture of Rhodian provenience.³ Among these is included a large head of Helios, found in the environs of the city of Rhodes, which is described by Botho Graef in the *Strena Helbigiana* with such glowing enthusiasm as almost to counterbalance its sad and

¹ *Bulletin de l'Académie Royale des Sciences et des Lettres de Danemark*, 1907, p. 23.

² A brief sketch of the Rhodian school of sculpture is given by H. van Gelder, *Geschichte der alten Rhodier* (1900), pp. 379 ff.

³ The interesting grave relief of a teacher, found at Trianda, dating from the second century B.C., was published by Hiller von Gaertringen and C. Robert in *Hermes*, XXXVII, 1902, pp. 121 ff. It was republished in Brunn-Bruckmann's *Denkmäler Griechischer und Römischer Sculptur*, pl. 579. A relief of the fifth century, found at Aphandu, was presented and discussed by Kekule von Stradonitz and Hiller von Gaertringen in the 65th *Programm zum Winckelmannsfeste*, Berlin, 1905. A mask of Heracles from Lindus was published by Hiller in *Strena Helbigiana* p. 137 f.

mutilated condition.¹ Some years earlier a bruised but charming head of Helios had been found at Trianda, near the site of the ancient city, Ialysus, and while in the possession of the American Consul at Rome was published by P. Hartwig in the *Römische Mitteilungen*, II, 1887, pp. 159 ff., pl. VII, VIIa. It is now my good fortune to be able to make known a head which is as ex-



FIGURE 1.—HEAD OF HELIOS FROM RHODES

traordinary for its excellent state of preservation as it is interesting for its artistic connections.

This head, which is shown in PLATES VII and VIII and in the accompanying illustrations in the text, came into my possession from a Rhodian peasant of my acquaintance, who reported that he had found it while digging the foundation for a house just

¹ 'Helioskopf aus Rhodos' in *Strena Helbigiana* (1900), pp. 99 ff.

outside the modern town, but presumably well within the limits of the ancient city of Rhodes. The material is a white marble with a slightly grayish tone, of very large crystallization, such as may be found on the islands of Naxos and Paros.¹ The surface is rubbed a little in spots, with consequent loss in the delicate treatment of texture and modeling, but otherwise no injury has been suffered. The head is just life-size, the total height from chin to crown being 222 mm. with a width of 135 mm. from ear to ear.² The shape is round and mesocephalic giving a cephalic index of 79. The hair, which is short and curly, is bound by a fillet that on top passes behind two rows of curls and at the back of the head permits rather heavy locks to escape and lie on the neck. In the arrangement of the fillet considerable variety is obtained, inasmuch as at the back of the head the hair is bound in an orderly fashion that makes each lock below clearly a continuation of one above, while on the side short, rebellious curls refusing to be bound, lie about and, occasionally, upon the fillet itself. The curls start from a central point on the crown; they present somewhat the appearance of the tentacles of a starfish, and are spread over the head in an irregular manner, now a lock being turned to the right while its neighbor is curled to the left, so that monotonous uniformity is successfully avoided. The execution of the hair appears rude and unfinished when closely examined, for the locks are roughly modeled and are separated by deep cuts and grooves. The variety of plane that is thus achieved, however, evidently reveals a conscious effort to emphasize the interplay of light and shade, the effect of which is more fully realized when it is remembered that the statue, of which this head was a part, stood in the open air and, probably, in the bright sunshine that for most of the year blesses the fortunate Isle of Rhodes. But the most characteristic element in the treatment of this hair is seen in the way in which short separate

¹ G. R. Lepsius, *Griechische Marmorstudien*, p. 43.

² Other measurements are: Chin to roots of hair, 157 mm. Chin to root of nose, 108 mm. Chin to inner corner of eye, 98 mm. Chin to outer corner of eye, 108 mm. Chin to lower end of nose, 65 mm. Chin to mouth, 44 mm. Width of mouth, 43 mm. Length of eye, 29 mm. Roots of hair to root of nose, 50 mm. Roots of hair to lower end of nose, 98 mm. Roots of hair to inner corner of eye, 64 mm. Roots of hair to mouth, 117 mm. Distance between inner ends of eyes, 27 mm. Distance between outer ends of eyes, 84 mm. Corner of mouth to inner corner of eye, 55 mm. Corner of mouth to outer corner of eye, 60 mm.

locks, brushed up and left in an upright position, frame the forehead, forming a natural diadem.

Another remarkable characteristic of the head is illustrated to best advantage in the full-face view, PLATE VIII. The artist obviously has sought to convey the impression of the rotundity of the visage, by making the cheeks full and fat and by lessening the distance between the eyebrows and the mouth, thus shortening the length of the nose. This proportion is quite unusual, being, in fact, only 40 per cent. of the distance from the chin to the roots of the hair on the forehead, while on the *Hermes of Praxiteles*, for example, the percentage is about 48, which seems a fair average, as in a series of statues examined the measurements range between 45 per cent. and 50 per cent. The forehead is almost rectangular in shape, with protruding locks of hair on either side. The eyes, which are small and narrow, have thin lids; their inner commissures are sunk deeply in the head, while toward the outer ends there is a slant upward and the corners are shadowed by overlapping rolls of flesh from the low-hanging brows. The bridge of the nose is broad and flat, with a very slight depression in the line of continuation from the forehead. About the nostrils, as below the eyes and on the cheeks, there is delicate modeling that emphasizes the high cheek bones and suggests, in general, the structure of the skull beneath the skin. Beside the ear, which is flat and slender, a curl hangs down on the cheek, and the hair otherwise is so arranged as largely to frame the ear, but in no part to conceal it. The mouth is narrow; the lips, which are slightly parted, are turned up at the outer edges, and the under lip has a moderately deep roll outward that makes possible a gracefully modeled depression between it and the chin. The chin itself is rounded but strong, and the neck is thick, with its swelling muscles accentuated. The head is slightly inclined to the right, and the eyes are looking down at something a little in advance.

The general impression conveyed by this head is one of reserved dignity and of benignant strength, and it is clearly an ideal head representing a young and vigorous god. Two deities were worshipped in the island of Rhodes who might be portrayed conceivably by this type, *Heracles* and *Helios*. In the absence of an inscription or of some determinative characteristic, clearly it is not possible, with certainty, to identify a statue, much less a head that is severed from its trunk. Indeed this observation is

already made by Dio Chrysostom, who, in his oration on Rhodian matters, refers to the difficulty of recognizing statues dedicated with insufficient means of identification, with the inevitable result that athletes are confused sometimes with heroes and heroes occasionally are mistaken for gods.¹ It is necessary, therefore, to study our head intrinsically and comparatively and to seek a plausible conclusion in the cumulation of probabilities.

Mention is made of Heracles and of priests of Heracles in inscriptions found in various parts of the island,² but interest in his cult seems largely to have been limited to the curious ritual performed at Thermydron, near Lindus, where two bullocks were sacrificed annually to the accompaniment of curses.³ The type of Heracles who was here worshipped is nowhere described, although we know that Parrhasius in the fifth century painted a picture of this god for the Lindians;⁴ nor is any assistance afforded by representations of Heracles that have been found in Rhodes. The group of the infant Heracles strangling the serpents was adopted as the common coin type of the allied cities, Rhodes, Samos, Ephesus, Cnidus, Iasus, after Konon's victory in 394 B.C.⁵ The mask of Heracles from Lindus⁶ is much mutilated and at best represents a peculiar phase of the hero that has no relation to the present discussion; the relief showing Heracles riding on an ass is rude and worn and must be dated, without doubt, in imperial times.⁷ No characteristic of our head, other than its youthful strength, is indicative of Heracles. On the contrary the flat and narrow ear is very different from the swollen, misshaped organ usually found on the athletic type of head, whether of god or mortal, due to blows received in boxing and combat.⁸

¹ Dio Chrys. *Orat.* XXXI, 90 ff.

² *I. G.* XII, 1, 8; 705, 24; *Arch. Zeit.* XXXVI, 1878, p. 163; van Gelder, *op. cit.* pp. 346 ff.

³ *I. G.* XII, 1, 791-804 refer to this sacrifice but do not mention the name of Heracles. The matter is fully discussed with an exposition of archaeological and literary sources by van Gelder, *op. cit.* pp. 346 ff.

⁴ *Athen.* XII, 543 f.

⁵ Head, *Hist. Num.* 2nd ed., p. 638; p. 604, fig. 302; p. 573, etc.; *Catalogue of Greek Coins of Caria, Cos, Rhodes, etc., in the British Museum*, Introd. p. CIII; van Gelder, *op. cit.* p. 87.

⁶ *Strena Helbigiana*, p. 137.

⁷ *Arch. Zeit.* XXXVI, 1878, p. 30 and p. 163; *Beschreibung der antiken Sculpturen in Berlin*, No. 689.

⁸ Furtwängler, *Masterpieces*, p. 155; Homolle in *B.C.H.* XXIII, pp. 454, 455, 458; and especially Neugebauer, 'Studien über Skopas,' in *Beiträge zur Kunstgeschichte*, XXXIX, 1913, p. 35, n. 172.

It is true that on some heads of Heracles the hair is brushed up from the forehead in short locks, as may be seen on the head of Myronian type in the British Museum,¹ on a later beardless head in the same Museum,² in more modified form on the Heracles Chiaramonti,³ on a bronze statuette in the imperial collection in Vienna,⁴ and on other examples. But this treatment of the hair is by no means limited to Heracles, but is found, for example, on a bronze statuette of a youthful deity, perhaps Asclepius, now at Karlsruhe,⁵ on a bronze figure of Zeus in the British Museum,⁶ on a bronze head in Naples,⁷ and elsewhere. Indeed this treatment of the hair is claimed by Fräulein Bieber as one of the characteristics of the group of heads which she seeks to connect with the Paris of Euphranor.⁸ But in none of these instances have the brushed-up locks a shape like those on the Rhodian head, nowhere do they form such an important part of the coiffure, or frame thus conspicuously a face that is emphatically round. The conclusion, therefore, is inevitable that these striking characteristics have been employed with a definite purpose and that, in fact, by the round face with its crown of flame-like rays the artist has sought to suggest the radiated orb of the sun.

Helios was the legendary founder of Rhodes and was the chief deity of that fair island of the sun,⁹ which has natural beauty befitting the god.¹⁰ The centre of his worship was in the city of Rhodes, where were dedicated to him a temple and temenos and many statues. He was the god *par excellence* of the city, his priests were eponymous, his temple was the chamber of archives, and on the coins his image was stamped. This coin type, adopted with the foundation of the greater city in 407 B.C., represents

¹ *Catalogue of Sculpture*, III, No. 1734; Brunn-Bruckmann, *op. cit.* pl. 568.

² *Catalogue of Sculpture*, III, No. 1731, pl. V, 2; compare Graef in *Röm. Mitt.* IV, 1889, p. 195.

³ Furtwängler, *Masterpieces*, p. 342, fig. 147; Brunn-Bruckmann, *op. cit.* pl. 609.

⁴ *Jahrbuch der kunsthistorischen Sammlungen des allerhöchsten Kaiserhauses*, IX, 1889, pp. 135 ff., pl. I, II; Bulle, *Der schoene Mensch im Altertum*, pl. 57.

⁵ Schumacher, *Beschreibung der Sammlung antiker Bronzen*, pl. XXVII; Furtwängler, *Masterpieces*, p. 300, fig. 128.

⁶ *Catalogue of Bronzes*, No. 910; Furtwängler, *op. cit.* p. 299, fig. 127.

⁷ Brunn-Bruckmann, *op. cit.* pl. 364.

⁸ *Jb. Arch. I.* XXV, 1910, pp. 159 ff.; p. 170.

⁹ A good sketch of the cult of Helios at Rhodes is given by van Gelder, *op. cit.* pp. 290 ff.

¹⁰ Pindar, *Olym.* VII, 54 ff.; Lucian, *Erot.* 7.

the sun god by a youthful head, having a round face, fleshy cheeks and hair treated in some way to suggest the rays of the sun. There are two chief variations of the full-face type, as in one case the hair is brushed up about the face in flame-shaped locks,¹ while in the other the hair is parted in the middle and combed to each side in flowing strands.² The result is a gross exaggeration of nature, but it is impossible to mistake the artists' intention to personify the radiated orb of the sun. Actual rays around the head are not found on coins of the early period, but begin to appear toward the end of the fourth century,³ and belong to the type that is common after the beginning of the third century, the type that, presumably, was crystallized under the influence of the construction of the colossus.

The earlier conception of Helios is not limited to Rhodian coins but is represented also on vase paintings, as, for example, on an Attic hydria in Karlsruhe, dating from the end of the fifth century, which portrays the judgment of Paris.⁴ Helios appears in the corner rising over the mountains in a four-horse chariot. His hair is driven back from the forehead in flowing locks. There are no rays about the head, but in the background is seen a radiated disc. A very similar representation of the unradiated Helios is shown on a crater in Vienna,⁵ while the god on a red-figured pyxis of the Sabouroff collection differs only slightly from the preceding in that he wears a diadem, though the solar disc is still kept separate from the head.⁶ A diadem also, apparently, adorned the head of a Helios of this type who takes part in the gigantomachia on the frieze of the great altar from Pergamon.⁷

A bronze statuette in the Berlin collection, identified as Helios,⁸ exhibits a nude youth, with lowered left hand that had held a

¹ Good examples are reproduced by Head, *Catalogue of Greek Coins of Caria, Cos, Rhodes, etc., in the British Museum*, pl. XXXVI, Nos. 1, 3; and by Babelon, *Trinité des monnaies grecques*, pl. CXLVII, No. 6.

² Head, *op. cit.* pl. XXXVI, Nos. 5, 6, 7, 8, etc.; Babelon, *op. cit.* pl. CXLVII, Nos. 2, 8, 11.

³ Head, *op. cit.*, Introduction, pp. CIII and CVI.

⁴ Furtwängler-Reichhold, *Griechische Vasenmalerei*, I, pl. 30.

⁵ *Wiener Vorlegeblätter*, E, pl. XI.

⁶ Furtwängler, *Collection Sabouroff*, I, pl. LXIII. In the text that accompanies this plate the author discusses the development of the Helios type and shows, on page 4, that the application of rays to the head is a later conception.

⁷ *Altortümer von Pergamon*, III, 2, pl. IV; XXV, 4; text p. 27.

⁸ *Arch. Anz.* VI, 1891, p. 123; compare E. Cahen, *s. v. sol* in Daremberg and Saglio, *Dictionnaire des Antiquités*, IV, 2, p. 1380.

round object like a whip, and upraised right arm. The face is full, the hair is brushed up from the forehead and the expression is directed upward. In a somewhat similar manner, too, Helios is represented by a colossal marble statue in Berlin, that is of much later date.¹ Here the body is nude, except for the chlamys that is thrown back from the right shoulder, the face is round, the cheeks are fat, and the hair is treated in flaming locks, as on the heads of the Rhodian coins. On the base of this statue is preserved part of an inscription beginning with the names Zeus Helios.

The head of Helios is found frequently represented on clay stamps from Rhodes, which repeat the types made familiar from the Rhodian coins,² but also among the nearly three thousand stamped amphora handles, discovered in Lindus and published by Martin P. Nilsson,³ some rectangular stamps reveal a standing figure of Helios, on which the god's head is sometimes crowned by rays; sometimes the head is not radiated, but a star or stars are placed near it; or again the god may be represented without rays and without accompanying stars. These instances are cited to show that Greek and Roman artists often regarded the sun god as sufficiently characterized by the treatment of the hair, and by a tendency to roundness of the face, and that the crown of rays about the head, which was unknown in the early period, began to appear first in the course of the fourth century but never became an indispensable attribute.⁴

Among the statues of Helios dedicated at Rhodes two are designated as particularly famous and the names of their sculptors are known. One was the bronze colossus by Chares of Lindus, and the other was by Chares' more distinguished master, Lysippus of Sicyon, who, Pliny tells us,⁵ was especially noted for his chariot with Helios of the Rhodians. Archaeological confirmation of the professional activity of Lysippus at Rhodes has been discovered at Lindus, in the form of a fragmentary inscription with the sculptor's name.⁶ Cassius, in the year 42 B.C.,

¹ *Arch. Zeit.* XVIII, p. 130, pl. CXLV.

² Schuchhardt in *Altertümer von Pergamon*, VIII, 2, p. 431.

³ *Bulletin de l'Académie Royale des Sciences et des Lettres de Danemark*, 1909, pp. 37 ff., pl. II.

⁴ Stephani, *Nimbus und Strahlenkranz*, pp. 26 and 93.

⁵ *Nat. Hist.* XXXIV, 63.

⁶ *Bulletin de l'Académie Royale des Sciences et des Lettres de Danemark*, 1907, p. 24.

captured the city of Rhodes, and on that occasion the historian Cassius Dio¹ reports that the general carried off the treasure and sacred objects and dedications, except the chariot of the sun. We do not know if this was spared because of its size, or if Cassius left this treasure to the citizens in memory of his student days at Rhodes. Owing to a disturbance in the text of Pliny,² it is not absolutely certain that the account of a statue in Rome covered by order of Nero with gold, that, as an obvious blemish, was soon again removed, refers to the Helios of Lysippus, but in any event the group at Rhodes was a very famous work that, without doubt, was much copied and imitated in the island.³

Hartwig has sought to connect the head from Trianda with this statue by Lysippus, and in fact goes so far as to suggest the possibility that it is a copy made from the masterpiece.⁴ The head belongs to the youthful athletic type of the fourth century. The hair is brushed up slightly on the forehead, and the eyes are looking upward, but the author acknowledges (p. 160) that, were it not for the fact that the head was found in Rhodes and that there are holes in the marble for a crown of metal rays, it would have been difficult to identify it as Helios.

Twenty-eight years have passed since Hartwig published this head in the *Römische Mitteilungen*, and we know little more about the artistic characteristics of Lysippus than was known then. There are still some adherents to the school that recognized the Apoxyomenos of the Vatican as the norm of Lysippus,⁵ others, with the Gardner brothers, have supplanted the Apoxyomenos by the Agias of Delphi,⁶ still others have sought to compromise the question of stylistic differences between the two works by attributing the Agias to an earlier, the Apoxyomenos to a later period in the artistic career of Lysippus,⁷ while the latest work on the subject, rejecting both the Apoxyomenos and

¹ Cass. Dio, XLVII, 33, 4.

² An intervening sentence that mentions a statue of Alexander the Great is regarded usually as an interpolation.

³ Brunn, *Geschichte der Griechischen Künstler*, I, p. 361.

⁴ *Röm. Mitt.* II, 1887, p. 163 f.

⁵ Loewy, *Röm. Mitt.* XVI, 1901, p. 392.

⁶ P. Gardner in *J.H.S.* XXIII, 1903, p. 135; XXV, 1905, p. 236. E. A. Gardner in *Six Greek Sculptors*, p. 222. Other supporters of this view are cited by P. Wolters in *Sitzungsberichte d. Akad. d. Wissenschaften in München*, 1913, 4, p. 44, n. 3.

⁷ Collignon, *Lysippe*, p. 31. Amelung, *Röm. Mitt.* XX, 1905, p. 144 f. Compare Wolters, *l. c.* p. 44, n. 2.

the Agias, selects as the basis for the determination of Lysippean characteristics the Apoxyomenos in the Uffizi Gallery at Florence.¹ In this monograph an Italian woman, Ada Maviglia, gives an interesting presentation of her thesis, but the theory is not susceptible of proof. The chief difficulty about penetrating the haze that surrounds Lysippos is to be found in the fact that he was a great borrower and adopted traits and characteristics of several of his predecessors, especially Polyclitus, Scopas and Praxiteles, as was emphasized by Homolle in his study of the statues of Agias and the other members of the group dedicated by Daochos at Delphi.² And this view Fräulein Bieber unconsciously supports when, after categorically denying that the Delphian monument is by Lysippos, she proceeds to point out that one figure of the group exhibits the influence of Praxiteles, another is wrought after a Polyclitan model, another shows affinity to the style of Scopas, and concludes by accepting the possibility that a vision of the bronze statue by Lysippos in Pharsalus may have hovered in the mind of the master of the Agias.³ So, in spite of objections that have been raised to the attribution of the Delphian Agias to Lysippos, and in spite of the recent criticism of the inscriptions, whereby Wolters seeks to prove that the Delphian inscription and, consequently, the Delphian monument antedate the inscription and dedication at Pharsalus,⁴ much plausibility still adheres to Homolle's argument,⁵ and until further light on the subject the Agias must be considered in any study of the characteristics of Lysippean style.

Some resemblances between the Rhodian head and that of Agias⁶ may be noted, particularly in the treatment of the back hair, in the manner in which the locks are brought out from under the fillet, in the grouping of the separate locks in circular fashion about the crown,⁷ and in the general roughness of the finish of the hair, which must have depended for its effect on color, light and distance from the spectator.⁸ The shape of the ear is somewhat

¹ A. Maviglia, *L'Attività artistica di Lisippo ricostruita su nuova base*, 1914.

² *B.C.H.* XXIII, 1899, p. 471.

³ *Jb. Arch. I.* XXV, 1910, pp. 172 and 173.

⁴ *Op. cit.* 1913, 4, pp. 40 ff.

⁵ *Loc. cit.* pp. 444 and 445.

⁶ *Fouilles de Delphes*, IV, pl. LXIII, LXIV.

⁷ Seen also on the Apoxyomenos of the Vatican, Brunn-Bruckmann, pl. 487.

⁸ Homolle in *B.C.H.* XXIII, 1899, p. 454. A parallel instance may be cited in the case of the Aberdeen head in the British Museum, on which the locks are separated by deeply cut grooves, as noted by Mrs. Strong in Furtwängler's *Masterpieces*, p. 346.

similar, as is the way in which the hair is arranged about it. The eyes in both heads are small, their inner ends being placed rather deeply, while over the outer edges appear the thickened rolls of flesh.¹ The cheek bones are high, the upper lip, mouth and chin are similar and there is the same swelling muscle in the neck.

Our head must be compared also with the group of heads of

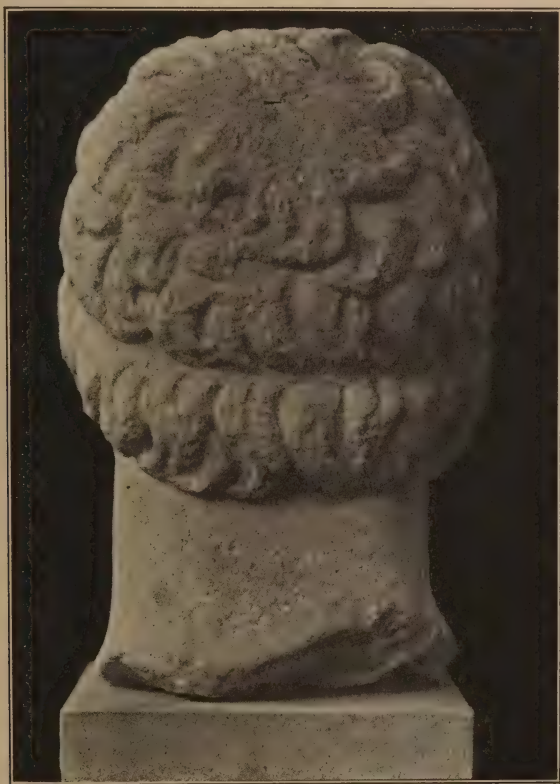


FIGURE 2.—HEAD OF HELIOS FROM RHODES; BACK

the fourth century that is discussed by Margarete Bieber in the course of her study of the head of a youth in Kassel.² The Rhodian head bears strong resemblance to the head at Kassel in

¹ This treatment of the eyebrows is fully discussed, in connection with its appearance on the Scopaic heads from Tegea, by K. A. Neugebauer, 'Studien über Skopas' in *Beiträge zur Kunstgeschichte*, XXXIX, 1913, pp. 41 ff.

² *Jb. Arch. I.* XXV, 1910, pp. 159 ff. The head at Kassel is reproduced on p. 160, fig. 1, a and b; p. 163, fig. 4 b.

the rectangular shape of forehead, in the combed-up locks of hair, in the curl hanging down beside the ear, in the broad flat bridge of the nose, in the straight eyebrows, in the narrow eyes, and in the shape of the slightly parted lips, with their suggestion of a smile. The head in Kassel is regarded by Fräulein Bieber as an inexact copy of the bronze statue from Anticythera, or, at least, as a copy of an original by the same artist,¹ and this artist she believes to be Euphranor. Two other heads in this group have various characteristics that are common to the head from Rhodes, one is the bronze head of a youth in Naples,² the other a marble head in the National Museum at Athens.³

Greater resemblance, however, exists between the Helios and a small bronze statue in the Ny Carlsberg Glyptotek in Copenhagen.⁴ This figure at first was called a charioteer,⁵ but Arndt in his publication of the Ny Carlsberg plates agreed with Furtwängler in declaring it to be Heracles,⁶ and this opinion has generally been accepted.⁷ The interpretation as Heracles rests on two points only, the position of the fingers of the left hand, which are supposed to have held the bow and an extra arrow, and the presence of the quiver band about the body. No satisfactory explanation is given of the purpose of the hanging right arm, and Fräulein Bieber, comparing this hand with the left hand of the bronze youth from Anticythera, seeks to bring the Copenhagen statue into membership in her Paris group.⁸ Suggested interpretations of unidentified statues are often merely hazardous conjectures, but is it not easier to return to the original explanation of the figure as a charioteer? The provenience of the statue, which was purchased in Rome,⁹ is unknown; had it been found in Rhodes there would be little difficulty as to its interpretation. In view, therefore, of its resemblance to the head from Rhodes it may not be too venturesome to suggest that the bronze statue represents Helios of the Rhodians, who

¹ *Loc. cit.* p. 162-163.

² Brunn-Bruckmann, pl. 364; Bieber, *loc. cit.* p. 162, fig. 3.

³ No. 318; reproduced by G. Cultrera, 'Una Statua di Ercole,' in *Memorie della R. Accademia dei Lincei*, XIV, fasc. III, 1910, p. 274, fig. 25.

⁴ Arndt, *La Glyptothèque Ny-Carlsberg*, pl. 89-92.

⁵ See Furtwängler, *Meisterwerke*, p. 518, n. 3.

⁶ Text, p. 136.

⁷ Cultrera, *op. cit.* p. 180.

⁸ *Op. cit.* p. 168.

⁹ Dr. Poulsen, Director of the Ny Carlsberg Glyptotek, kindly sent me this information.

in his extended left hand grasped firmly the reins of the four horses of the chariot,¹ while the hanging right hand held the whip, as charioteers commonly do in just this pose.² Around his body is visible the quiver band, but possibly this was adorned with the signs of the zodiac, like the band around the beautiful torso of Helios in the Vatican.³ Indeed the bow and the quiver are known to be distinguishing characteristics of Helios and are carried by him in a representation on a carnelian gem in Naples, which dates from the Hellenistic period; in this scene the nude figure of the god is shown standing in a chariot as he guides the mounting horses.⁴ The gaze of the Copenhagen figure is very exactly directed to where the horses may be supposed to be rearing, and the blue eye, that was found with the statue, would be appropriately the eye of the sun. Furthermore the assumption of the position of the figure in a chariot would account for the remarkably disproportionate size of the feet, which in a chariot would not be noticeable, but which make an unfavorable impression when the statue is separated from its group.⁵ The base, which has been added by the Roman copyist, is decorated by a spiral ornament on top, and at each corner by a star,⁶ which is similar in form to the stars that accompany Helios on the vase paintings and on the Rhodian stamps.

The Rhodian head and the head of the bronze youth in Copen-

¹ In spite of the fact that a bow and arrow were evidently held in a similar arrangement of fingers by Paris from the west pediment, at Aegina (Brunn-Bruckmann, pl. 24), by Apollo in the Museum at Kassel (*ibid.* pl. 676), by Heracles in the imperial collection at Vienna (*Jahrb. d. kunsth. Samm. d. Kaiserhauses*, IX, 1889, p. 135, pl. I, II), considerable experience in driving, with attention directed to this point, has convinced me that such a position of the fingers is not only possible but natural in the handling of spirited horses.

² Several nude, or practically nude, statues of Helios as charioteer have already been mentioned. Reference may be made also to the Helios on a Pompeian wall painting, who is clad only in a chlamys flying back from the body (shown in Roscher's *Lexikon Griech. u. Röm. Myth.* I, 2003, from *Mus. Borbon.* 7, 55); to a nude Helios in the representation of the scene of the fall of Phaethon on the mould for an Arretine bowl in the Boston Museum (Hartwig in *Philologus*, XII, 1899, pp. 481 ff.); to a Helios, almost nude, on a sardonyx cameo at Florence (Daremberg and Saglio, *Dict. Ant. s. v. sol*, IV, 2, p. 1380); and to nude figures of Helios on other gems (Furtwängler, *Beschreibung d. geschnittenen Steine*, Nos. 8651-8654; compare No. 8160).

³ Reproduced in Roscher's *Lexikon Griech. u. Röm. Myth.* I, 2002.

⁴ Furtwängler, *Die Antiken Gemmen*, I, pl. XLII, 27; II, p. 201.

⁵ Arndt, *op. cit.* pl. 90.

⁶ A diagram of the top of the base is given by Arndt, *op. cit.* text p. 136, fig. 73.

hagen, when placed in juxtaposition, show many similar traits which may be briefly indicated. The hair is brushed in rising locks above the forehead, which on each head is rectangular in shape, and is pinched in at the sides, below the temples; the eyes are deeply placed at the inner ends, and at the outer are shaded by the brow. Each head has a broad, flat nose, a similar expression about the nostrils, a small mouth with slightly opened lips, full cheeks and rounded chin. In spite of the different materials of workmanship there is also considerable resemblance in the treatment of the hair, which is evident by comparing the back of the head of Helios (Fig. 2) with the back of the bronze head that is shown by Arndt on plate 92. Directly at the back the fillet binds down a group of heavy locks, which are clearly marked as units, extending below from above the band; above these again is an isolated central lock, which is flanked above by two curls arranged to turn in contrary directions. By the side of the ear, too, is seen the characteristic curl which, however, on the bronze head is associated with whiskers continuing down the cheek.

The bronze statue in Copenhagen is related to another work that has been variously assigned, the Heracles in Lansdowne House, London.¹ The best reproductions of this statue, made from photographs especially taken for the purpose, are given by E. A. Gardner in *Six Greek Sculptors*, plates LVI, LVII, LVIII, and with these the views of the Rhodian head should be compared. The shape of the two heads is similar, as is the structure of the forehead, with the extending locks on each side, below which the head is slightly pinched just above the outer ends of the eyes. The strong resemblance in the treatment of the head in this part, that is, about the temples, at the limit of the forehead, and where forehead and brow are merged into the cheek, is apparent when our Figure 1 is placed beside Gardner's plate LVIII. The eyes in each case are small and are deeply inset at the root of the nose, with the outer ends shaded by the thickened brow; the lower lids are very thin. The bridge of the nose is broad and flat, and a somewhat similar expression is suggested by the modeling about the nostrils. The cheeks are full and the neck is heavy and thick with swelling muscles on the left side. Also the same motive is carried out in the arrangement of the hair, especially on the top and at the back of the head, where

¹ Furtwängler, *Meisterwerke*, p. 518; Arndt, *op. cit.* text, p. 136.

curling locks are scattered in deliberate disorder, starting from the centre of the crown. The Lansdowne Heracles was assigned to Lysippus by Michaelis¹ as early as 1882, but after the discovery of the heads at Tegea, works of Scopas or of his immediate school, scholarly opinion was inclined to follow Furtwängler's reasoning,² and to bring the Heracles into the Scopaeic sphere,



FIGURE 3.—HEAD OF HELIOS FROM RHODES; PROFILE

particularly on account of the expression and treatment of the eyes. Now, however, that judgment has wavered again, on account of resemblances between the Heracles and Agias, with the result that those who attribute Agias to Lysippus regard the

¹ *Ancient Marbles in Great Britain*, p. 451.

² Furtwängler, *Masterpieces*, pp. 296 ff; compare also Homolle in *B.C.H.* XXIII, 1899, p. 450, n. 2.

Lansdowne Heracles as a product of the same school.¹ Since this statue of Heracles exhibits characteristics of the style of Polyclitus,² of Scopas, and of Praxiteles,³ the logical conclusion must be that it is the work of an artist who combined such varying traits, and this we know was done by Lysippus.

Without further discussing uncertain comparisons, but upon the basis of the resemblances that have been indicated between the head from Rhodes and the series of statues presented, it is safe to conclude that our head is a work, executed in the fourth century, by a Rhodian artist, who was strongly influenced by Lysippus, and who, probably, made a statue of Helios of the Rhodians after the manner of the masterpiece created by Lysippus for Rhodes.

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¹ P. Gardner, *J.H.S.* XXIII, 1903, p. 128; XXV, 1905, p. 240; Cultrera, *op. cit.* p. 188.

² Kalkmann, *Die Proportionen des Gesichts in der griechischen Kunst*, 53 *Programm zum Winckelmannsfeste in Berlin*, p. 60, n. 3.

³ Graef, *Röm. Mitt.* IV, 1889, p. 207, n. 1.



BUTTON BEADS; FIFTH CENTURY B. C. TO FOURTH CENTURY A. D.



BUTTON BEADS; THIRD CENTURY B. C. TO FOURTH CENTURY A. D.

Eisen del

BUTTON BEADS—WITH SPECIAL REFERENCE TO
THOSE OF THE ETRUSCAN AND
ROMAN PERIODS

[PLATES IX-X]

THE name "button" is given to a large class of minute objects of glass recalling the form of a modern button, but without any group of central holes. They are especially common in collections of objects dating from the late Etruscan period, as well as from the time of the Roman Empire, but are by no means confined to Italy; in fact, they seem to be even more common in Syria and Egypt. Although sometimes of great beauty and artistic workmanship, they have never been the object of serious study, and they possess practically no literature. They have been mentioned and figured in many publications, but without any particular reference to their use. In most museums they are labeled as buttons, dice, markers, or as objects of uncertain nature. The great number of these objects which exists in collections and in the shops indicates that they must have been of common use; and as even a hasty examination reveals the fact that changes in their ornamentation are characteristic of certain periods, it is clear that a closer study of them may be not only interesting but important.

While in Egypt I came into possession of a necklace entirely made up of such buttons, two and two of which had been cemented together so as to form a single bead. My first impression was that I had to do with a falsification, but my interest having been aroused I soon began a systematic investigation which finally confirmed their use as beads or units in necklaces, and showed that their use as buttons must have been limited to some without any ornamentation, as any covering would have spoiled their appearance.

General Appearance.—Circular, oval, flat, plane, convex or convex-concave. It is also interesting to find that only the upper convex or conical surface is deliberately ornamented, the

under surface being left crude. The great majority of these buttons is not furnished with any hole or bore. Some few have a central hole, but none has ever been found with several holes in the centre like the buttons used in our day. If those with a central hole had actually been used as buttons, the thread passing over the sides would have so injured their appearance as to make them unpopular. Their general appearance is, however, such that we can but compare them with the wooden cores used in cloth buttons, and the popular name is thus somewhat justified, even though it carries with it a false impression of their nature.

Classification.—The button beads can be classified in different ways, according to the absence or presence of a central hole (PLATE IX, Figs. 5, 11, etc.), or according to their form, some being circular (Fig. 2), others being oval or ovoid (Fig. 24, etc.). One class is heartshaped (Fig. 39). They might also be considered with regard to their ornamentation, as plain, ornamented, made of mosaic glass, etc. (Figs. 2, 14, 17, etc.). Or we may distinguish those with a flat under surface from those which are concave. But all such classifications are too artificial to have any chronological value, and only assist us in describing the objects. Chronologically considered and with due regard to their characteristics in shape, ornamentation and matrix, they can be divided into four or more classes which, however, overlap more or less.

A. Form generally circular, in vertical section thin, plane-convex or convex-concave. The characteristic ornamentation consists of the comma and comet patterns (PLATE IX, Figs. 2, 6 and 7). Others are with feather and leaf-pattern (PLATE IX, Figs. 9, 10), rings (Fig. 12), spirals (Figs. 5, 11), superposed bars in form of a cross (Fig. 8), or with twisted threads in form of a cross (Fig. 13), or around the edge (Fig. 1). Others are of plain glass. Those with circular dots also belong to this class (Fig. 16; also Fig. 21).

This class belongs to the fifth century B.C. and probably extended into the next century, some types lasting into the Roman Empire. The comet pattern is not found on any certainly Roman specimen.

B. This class is the next in importance. The bead units are less well made, mostly of plain glass, circular or ovoid when viewed from the top face, plane-convex when seen from

the side. Figure 24 represents one of this type. The earliest known are from the twentieth Dynasty, but beads of this class continued to be made during several hundred years (PLATE IX, Figs. 26, 27), far into the Roman Empire.

C. Beads made of mosaic and millefiori glass. These date from the time of the Ptolemies and continued in use at least to the fourth century A.D. and possibly later (PLATES IX, X, Figs. 22, 17, 28-35, 38). To this general class can conveniently be referred such button beads as Figures 18, 25 and 34, in which some of the eyes may have been made of cut off rods, others simply painted on. This class contains both circular and ovoid buttons, and those with a central hole, always circular, are more common than in the other classes.

D. A well defined class is confined to the time of the Roman Empire, so far as we know, is heart-shaped when seen from top or bottom, but plane-convex when seen from the side. The convex face is always divided into three lobes, like those of a melon bead. They are always bored, with the bore running in the long diameter. They are mostly made of fine blue glass, the effect of which is heightened by a thin layer of white cement covering the flat back of the bead. These buttons may have been used in the same manner as the others, that is, two units cemented together to make up one single bead in a necklace. Or they may have been used as pendants in a necklace. They are found, like other beads, of graded sizes. The bore, always very thin, I take it was for greater security, the bead generally being made of fine glass. If these beads had been intended to be used singly, the white cement on the flat side would probably have been covered with glass or glaze, like gold-glass beads. Figure 39 gives an idea of this type, seen from the top, from the long side, and from the side of the bore.

Chronology.—Many of the oval kind, like Figure 24, are exhibited in museums or sold as samples of Phoenician glass. I have lately seen one of the twentieth Dynasty and another datable in the eighth century B.C. from Lecce in Italy, but I know of none between the eighth and the fifth centuries. The fine circular kind, represented by Figures 2-13, is well represented in Italian museums, such as Ancona, Bologna, Florence, Rome, etc., and the consensus of opinion is that these beads occur with objects of the fifth century B.C. and possibly also later. Those from Bologna are dated to the

middle of the fifth century B.C. through having been found with Greek vases of that date. The one represented by Figure 4 is exactly similar to one in the National Museum of Ancona (case 8, tomb 4), found with a bead of the fifth century B.C. The one represented by Figure 5 resembles exactly one in the same museum (Sala B), from a Gallic tomb at Montefortino, dated to the fourth century B.C. on account of a bead with leaf and feather pattern, a type which does not seem to belong to the fifth century B.C. The type represented by Figure 24 was found in quantity by Dr. Giglioli, inspector of the Etruscan Museum of Rome, during his excavations at Capena, together with vases that cannot be later than the third century B.C. or earlier than the fourth century B.C., all being of plain glass, more or less irregularly oval or circular.

In the store room of the Museo Nazionale delle Terme in Rome there is quite a collection of button beads which are said to have been found during the excavations of the banks of the Tiber, or simply picked up from the surface of the ground. At any rate they can be considered as Roman, probably from the early Empire, many being made of mosaic or millefiori glass (Figs. 22, 28-33, 35-36, 38). Finally we have the type represented by Figure 17, which is made of green and yellow millefiori glass. These beads are very common in all collections, probably dating from the second century A.D., to the fourth century A.D. Messrs. A. M. Lythgoe and H. E. Winlock of the Metropolitan Museum in New York found many during their excavations in a village in the Oasis of Khargeh¹ in Egypt, dating from the fourth century A.D. After that date buttons become rarer, and although some are found in the Lombard collections of the National Museum of Rome, and one in the Merovingian collection loaned by Mr. J. P. Morgan to the Metropolitan Museum, none are sufficiently characterized to add to our knowledge of their chronology. The one in the Morgan collection is of pale, cobalt blue glass, in size and shape like Figure 37, but apparently plane-convex, and without any ornamentation.

Technique.—The highly ornamental button beads of the fifth century B.C., which are so richly illustrated in the collections of

¹The pierced button with the four bars and the four eyes is similar to a series found by Mr. A. M. Lythgoe and Mr. H. E. Winlock at Khargeh, and certainly of the fourth century A.D. The sample figured is from the Murch Collection in the Metropolitan Museum.

Bologna and Rome, have the spirals, comets, commas, bars, and spots produced by an overlaid thread of glass, which after having been melted on the surface was rolled into the matrix. The foliate pattern (PLATE IX, Figs. 9 and 10) was produced by winding a thread spirally over the surface, commencing in the centre and ending on the edge or on the back of the bead (Fig. 3), after which the threads were raked up and down, thus producing the pattern. The remarkable button bead (Fig. 1) from the Castellani collection in Rome consists of a black matrix, overlaid with a very thin film of glass, or perhaps more correctly, by several comma and comet films. The most intricate pattern is that which I designate as the "comet" and which more than any other calls forth our admiration; it was, however, produced in the simplest way. For this information I am indebted to Mr. Giorgio Sangiorgi in Rome who has made a specialty of antique glass, and whose private collection is said to be one of the best in Italy. When the button was soft, two or more short bars of glass were placed on the surface, after which the surface was pressed into a concave mould and turned rapidly around once. The effect was to spread the ends of the short bars into a curved tail. The "commas" were produced in a similar manner from dots. In turning the bead a rod, made either of glass or bronze, must have been inserted in the back, and used as a handle. Remains of this rod are often seen in the central cavity of the back (Figs. 3, 37), which have led some to presume that we had to deal with the remnants of an eyelet. But no such eyelet has ever been found, nor any fragment sufficiently large to assure us of its nature. Generally the inner hollow is smooth, and shows no breakage or fracture which might have held such an eyelet or staple, nor does more than a very small percentage of the buttons show any fragments whatever. But as the rod was an indispensable instrument in moulding the bead and in producing the necessary twist which could alone spread the short glass bars into comet tails, it seems probable that all such bronze fragments result from the flaked-off edge of the rod.

Cement.—If these buttons had been used cemented together we should expect to find traces of cement left on the under surface. And this is the case. I had found it on most buttons, and Dr. Giglioli, who kindly inspected the buttons found during his excavations at Capena, found that the majority held a trace

of cement on the under side, but that none possessed it on the upper side.

How and Where Found.—In studying various collections of buttons I was struck by the facility with which the buttons could be paired. There seemed generally to be two and two together of the same size, but often of distinct colors and patterns of ornaments. In this connection I remembered that few of the buttons have actually been found in the tombs, while many are constantly found by peasants in the upper layers of the soil. These two coincidences could readily be explained if we presume that the two cemented halves of the button bead must have parted and dropped at the same time as the owner was passing over the ground, and that in falling they could not have been separated very far. The fact that the bore, and therefore the string, passed through cement facilitated the parting of the two halves.

My observations seemed thus to confirm the genuineness of the necklace.

Advantages of Button Beads.—The only advantage that I can imagine is that the owner could turn the beads around at will, and thus possess two distinct necklaces instead of one, each bead being composed of two distinctly colored halves (Figs. 26, 27).

Buttons with a Central Hole.—Such beads are rare during the Etruscan period, and never common during Roman times. Their use must have been different from that of the entire buttons. Possibly they were used as ornaments on leather and fastened with a bronze brad, the head of which covered the outer bore, while the end was bent on the inner side of the leather.

Markers or Checkers.—In some collections our objects are labeled markers, etc. If used for such a purpose we should expect to find the edges worn and chipped. This is rarely the case, nor does the under surface appear to be scraped. In the Roman Forum, as well as on the Palatine, we find numerous game boards cut in the pavements of various buildings, etc. In their vicinity I have never found any markers like the buttons, but frequently some made of thin brick, ground off along the circumference. Still the supposition that some of our objects might have been used as markers, dice, and the like is strengthened by the fact that the Japanese used similar shaped objects of glass for such purposes. In the Ethnographic Museum in Munich is seen a

Japanese game board, with a box filled with several dozens of glass buttons, so similar to that represented by Figure 24 that when looking at them from a distance of a few feet I could not discover any difference. They were of similar shape, size, and color.

SUMMARY

Antique so called "markers, checkers and buttons" are generally halves of beads. The two halves, often of differently colored glass and of distinct ornamentation, were cemented together, the bore and thread passing through the cement, and only exceptionally through the glass. The thin film of cement often seen on the under surface is a remnant of the cement with which the halves were fastened together. The trace of bronze found in the cavity of the back is not the remains of an eyelet, but of the rod with which the button was handled when turned on the mould, in order to produce the comet pattern. As the earliest and finest buttons are ornamented with this pattern, it is possible that the pattern gave rise to the button bead. In order to produce this pattern on the face of the bead it was necessary to have the bead divided, so as to have a hold on its back. On a spherical bead, this pattern could not be produced without much difficulty, while a flat surface lent itself to it readily.

Other uses for these buttons are not entirely excluded. The buttons occur with equal frequency in Syria, Italy and Egypt, and seem to have been of universal use. No special types are confined to any one of these countries, so far as I know, a circumstance favoring a theory that they were manufactured in one country—probably Egypt. The necklace represented by Figures 26, 27 is from the Fayoum, Egypt.

GUSTAVUS EISEN.

EXPLANATIONS OF PLATES IX, X

FIGURES

1. Front and side view of a button bead of glass. Castellani collection, Rome. The black spots in the central disk are the black matrix appearing through the broken, superposed glass film. Figure made in 1911, since which time the bead has greatly deteriorated during an effort to clean it.
2. Button bead, side and front, Barberini collection, Rome, Museo Etrusco. Comet pattern. Chrome yellow and bright blue glass.

FIGURES

3. Button bead, Michaelangelo Inghirami collection, Volterra, Italy. One of the few beads of this type in which the back has any ornament. The glass threads from the face are carried over to the back. In the central concave part are seen a few fragments of the bronze rod used for turning and holding the bead.
- 4, 5. Button beads, face view. Barberini collection, Rome. Glass. Comet and spiral ornamentation.
- 6, 7. Button beads, face and side view. Inghirami collection. Comet and comma patterns. Glass.
8. Button bead, face view. Black glass, two crossing bands, cobalt green and white. Bologna, Museo Archeologico Nazionale. Case G. Giardino Margherita. No. 103. Dated by vase first half of fifth century B.C.
- 9, 10. Button beads, face view. Black glass base, white feather and leaf-ornament. Chiusi, Museo Civico.
11. Button bead with central hole. Face view. Blue glass base. Spiral of white glass. Museo Nazionale delle Terme, Rome.
- 12, 13. Two button beads, face and side. 12 is made of black glass base, with blue-green glass ornamentation; 13 is made of translucent glass base, with ornament consisting of two crossing, twisted glass threads, white and black. From the Certosa near Bologna. Museo Nazionale, Bologna. Case F.
- 14, 15. Two button beads, front and side. Monochrome glass. Museo Nazionale delle Terme, Rome.
16. Button bead, face view. Castellani collection, Rome. A similar bead but with pale cobalt blue base, is in the Museo delle Terme, Rome.
17. Button bead of millefiori glass. Bellucci collection, Perugia. Similar buttons are very common and are found in most collections. They can be dated to the Middle Roman Empire, and occur certainly in the middle of the fourth century A.D. and probably much earlier. Many similar buttons were found during the excavations in the Oasis of Khargeh in Egypt by Messrs Lythgoe and Winlock, for the Metropolitan Museum in New York. The millefiori rods, which are yellow on the outside, can be followed some distance into the green matrix.
18. Button bead, face. Black glass, ornaments white glass, overlaid. Museo Archeologico Nazionale, Florence, Italy. From Luini, No. 69, 659. Roman.
19. Button bead of pale sherry colored glass with superposed fragments of white glass. Seen together with the last. No. 12198.

FIGURES

20. Button bead, side view. Museo Nazionale delle Terme, Rome. Found with beads of the fourth century A.D. and probably of that date.
21. Button bead. Same museum, no number. Probably fifth to fourth century B.C. Such conical buttons are known from graves of the fifth century B.C., and the type seems to have continued into the Roman Empire.
- 22, 23. Two button beads of mosaic glass. Same museum as the last. From the time of Augustus. Beads of this type are very common and are made of every imaginable type of millefiori glass.
24. Transparent, monochrome button bead, from Capena. Etruscan Museum, Rome. Third century B.C. This variety resembles the Japanese markers and dice mentioned in the text.
25. Button in the Murch collection in the Metropolitan Museum, New York. Can be dated to the middle of the fourth century A.D. Translucent glass. Similar buttons have been found in the Khargeh Oasis.
- 26, 27. Button beads, original stringing from the Fayoum, Egypt. Probably early Roman, perhaps third century B.C. No. 26 is the actual size, seen with the beads so turned that they show both faces. The cement is white but has been stained yellow-brown so as to be less offensive to the eye. No. 27 is the same necklace, the beads turned so as to show only one face. It will be seen that by turning the beads around a different effect could be produced. This kind of necklace was probably worn by very poor people.
- 28-38. Button beads made of mosaic glass from the early part of the Roman Empire. No. 34 is from the collection of Cav. Bellucci, Perugia, and No. 37 from the Augusto Castellani collection in Rome. In the concave side of this bead are seen the remains of a glass tube, probably used in making the bead. All the other numbers are from the store room of the Museo Nazionale delle Terme in Rome.
39. Melon shaped button bead. These beads, common during the Roman Empire, are blue and black glass, and always with a thin bore in the glass. The under side of the blue glass beads is always covered with a white cement which heightened the blue color, which otherwise would have appeared too dark in top light. These beads seem to have been often used as pendants and are generally graded as to size, the smallest at the top or bottom of the pendant.

THE BRYN MAWR COLLECTION OF GREEK VASES

[PLATES XI-XIII]

BRYN MAWR COLLEGE has in its possession an interesting collection of Greek vases, important not only for the reason that they range in time from the early black figured specimens of the sixth century through the severe and fine styles of the red figured pottery, down to South Italian wares, but also because the individual examples are very representative of their respective periods. In this small collection the history of the development of the Greek vase painting may be chronologically traced with but few omissions in styles.

The College is indebted to Dr. Joseph Clark Hoppin for the main part of the collection, although some pieces were later added by Miss Caroline Ransom, now Assistant Curator of Egyptian Antiquities in the Metropolitan Museum in New York. Dr. Hoppin acquired most of the vases in 1901 when he was Professor of Archaeology in Bryn Mawr College, from Mr. E. P. Warren, of Lewes, England; the fund for the purchase was given by Mrs. Charles Van Brunt of Milton, Mass., and Miss Eleanor Clark of Boston, relatives of Dr. Hoppin. In 1902, Miss Ransom, then Professor of Archaeology, purchased and gave to the college a small cylix and many valuable fragments dating from the early severe period. These were acquired from Dr. Ludwig Pollak who had procured them at various times in the market for antiquities in Rome and who knew nothing further of their history. The present collection includes these two gifts.¹

¹ I am indebted to President Thomas of Bryn Mawr College for permission to publish the collection, to Dr. Joseph C. Hoppin and Dr. Caroline Ransom for information in regard to its acquisition; to Miss Gisela M. A. Richter, Assistant Curator of Classical Antiquities in the Metropolitan Museum, for kindly enabling me to study vases in the Metropolitan Museum and for furnishing me with photographs needed, and to Mr. L. D. Caskey, of the Boston Museum of Fine Arts. I also owe my thanks to Mr. Rhys Carpenter, Associate Professor of Archaeology in Bryn Mawr College, and to Mrs. Edith Hall Dohan, both of whom have read the manuscript and have made many valuable

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CYRENAIC CYLIX IN BRYN MAWR



HYDRIA IN BRYN MAWR



INTERIOR OF CYLIX AT BRYN MAWR

Since the vases have not been published,¹ and since the collection embraces one signed vase and others by known masters, as well as examples of non-Attic wares in the "Cyrenaic" and Cab-eiric pottery, it has seemed advisable to publish the most important vases and fragments.

If we follow an order roughly chronological in considering the various vases, passing over the Cretan,² Mycenaean, Rhodian, and Geometric fragments, which scarcely merit individual treatment but which are valuable material for the student in an historical survey, we come to the wares of the sixth century.

I. One of the most interesting vases in the collection (PLATE XI) is a "Cyrenaic" cylix (R 1734)³, perhaps since the Spartan excavations now properly termed "Laconian" cylix. It was bought by Dr. Hoppin "at the Borghese Palace at Pratica di Mare, the ancient Lavinium, out of a collection exhibited in the show-cases there." On the reverse of the bowl is a printed label, CASTEL CAMPANILE, 1837, the import of which is not understood. It may be a reference to the site where the vase was found.

The cylix is $5\frac{1}{2}$ inches in diameter. The foot, which would be an important criterion in dating, has been lost, and one handle is missing. The offset rim has suffered a large crack in baking. The interior and exterior of the vase are covered with a white slip which extends to the offset rim on the inside and which covers the outside as far up as the handles, except for some narrow bands painted over the slip in black and in red; the rim on the interior is done in a dark brown varnish. A rich, deep red is used on the shields, the crests of the helmets, the greaves, and the lower part of the short tunics; it is found at the waist, around the necks and on the arms as a band decoration. Further, a red

suggestions. Special thanks are due to Mr. J. D. Beazley for information in regard to the Epeleios vase in Munich and for notes on the Bryn Mawr vases, which were generously sent me. These notes reached me after this article had left my hands, but I have made use of them in footnotes. I desire in this place to express my thanks and appreciation to all those who have aided me.

¹ The red figured cylix with the *καλός* name Epeleios, was published in Gsell, *Fouilles de Vulci*, pls. XIII-XIV, shortly after its excavation, but the publication is not accessible to most students.

A red figured fragment with the head of Athena was published in *J.H.S.* 1911, 281, pl. X, as a fragment in the Boston Museum.

² Obtained through the kindness of Mrs. Edith Hall Dohan.

³ The letters and numbers R 1734, etc., refer to the Lewes House register.

circle surrounds the design and red is seen on the bellies of the lions and occasionally on the decorative ornaments in the field.

The design on the interior represents two armed warriors in combat. They wear crested helmets, short fringed tunics, and greaves and are equipped with shields seen in profile and spears. Their feet rest upon an exergue beneath which are two lions heraldically posed but so placed that one must turn the cylix entirely around to see them upright. The field is strewn with conventionalized lotus-buds, circles with dots inside them, and rosettes. Incision is extensively used.

On the exterior, a band of thin irregular rays extends upward from the joining of the foot, which is surrounded by two wide concentric circles of red and narrower circles of brown; above, concentric circles of brown, red, and black.

An attempt to date the vase, following the recent investigations of Dugas¹ and Droop,² shows that it must in all probability be placed in "early Laconian IV," 550-500 B.C. The use of the white slip is abandoned on the rim but is found elsewhere on the vase. The purple employed is the fresh red of the early vases of this class and the lotus-bud is broad in type, suggesting an early date. The clay is fine, the walls thin and handles delicate, indicating the influence of metal technique, often traceable in these vases. The work is careful, the quality of the slip good. The foot, which might prove of advantage here, is lost.

The cylix is undoubtedly one of the prizes of the collection belonging, as it does, to an isolated class of vases of which there are not many specimens. Furthermore, it is to be placed in the period before the degeneration in style and in richness of color sets in.

II. Black figured Hydria, R 2446, reminiscent of the style of Exekias and roughly contemporary with his works (PLATE XII). The vase was procured from the Forman sale in London, July 1900, No. 107, no provenance being given. It belonged to the "second and final portion" of the Forman collection of which there was no catalogue except the one of the sale. There the description reads: "Another [vase] with a man in a quadriga."

The hydria is $12\frac{3}{4}$ inches high, including the handle, and is divided into two zones of ornament with decorative patterns

¹ Dugas, *R. Arch.* 1907, pp. 36, 377.

² Droop, *J.H.S.* XXX, 1910, pp. 1 ff., "The Dates of the Vases Called "Cyrenaic." Cf. also for an account of these vases, Buschor, *Gr. Vasenmalerei*, pp. 116-121.

beneath. Below the main panel are two purple lines passing entirely around the vase, outlined against the black varnish. Another circle parallel with these is seen above the points of the rays which ascend from the base. The shoulder design is bordered at the top by bars, alternating black and purple, in frames. Below the panel is a design of lotus-buds; at the sides, on the body, ivy wreaths.

The design on the shoulder represents a combat between horsemen and warriors on foot. In the centre, a warrior with helmet, shield, and greaves is beset by a youthful horseman from either side. Beneath the horse's feet in each case, a fallen warrior is seen. At the ends of the main design armed warriors are shown retreating and looking back. There is a generous use of white for shields and crests of helmets, and purple is employed for the folds of garments and the manes of horses.

The body of the hydria is decorated with a panel on which a marriage procession is represented. The design is of the usual type. In a chariot drawn by four horses are a bearded man and a woman with her mantle drawn up over her head,—evidently the bridal couple. The male figure wears a long, richly embroidered himation of purple and black, decorated with white rosettes and dots of purple; around his head is a purple fillet. The woman at his side is also richly dressed. On the farther side of the chariot Apollo Citharoedus plays on his lyre and accompanies the procession. Facing him and partly concealed by the horses are Dionysus with his ivy crown and Aphrodite (?). Artemis stands at the horses' heads with the marriage torches in her hand and Hermes is almost concealed behind the horses, only his right shoulder covered by his mantle, his legs, and his winged boots being visible.

Who the bridal pair are, must remain uncertain since inscriptions are lacking. They may be gods, in which case we might have a representation of the nuptials of Peleus and Thetis—or perhaps Heracles and Hebe. The hydria recently acquired by the Metropolitan Museum with a scene similar to ours and bearing the *καλός* name Onetorides, seems to have the beginnings of the inscriptions Heracles and Hebe beside the two main figures.¹ Or they may be merely human figures in the presence of favorite deities.²

¹ *B. Metr. Mus.* X, No. 6, June, 1915, p. 122, fig. 2.

² For a discussion of the subject, cf. Förster, *Hochzeit des Zeus und der Hera*.

Representations of marriage processions are very common on Greek vases, nevertheless only one or two vases seem to be closely related to ours in drawing and design. The first of these is shown by Gerhard¹ and was at the time the drawing was made in an antique shop in Rome. The ornamentation is similar to ours and the arrangement of figures is the same except that Hermes and Dionysus are interchanged. The drawing is closely related to ours, though our artist has availed himself of more "short cuts" in the concealing of parts of his figures, the use of the white horse and the like. The second vase to which ours bears a certain similarity is the dateable Onetorides hydria in the Metropolitan Museum.² Our vase belongs roughly to the same period. The drawing does not show the minute care which marks most of the vases of Exekias but it probably belongs to the period in which he worked (550-530 B.C.). The vase is in excellent condition, the incision carefully wrought, and the elaborate use of white and purple gives an almost polychromatic effect.

III. Black figured Attic Amphora, R 2131 (Fig. 1). Height, $13\frac{3}{4}$ in.; $28\frac{1}{2}$ in. in circumference at widest point. From the Forman sale, London, July 1900, No. 108. The sale catalogue gives the following description: "Another [amphora] with the eyes symbolic on body."

The vase is a good piece of work on the part of the potter as well as the painter. The amphora is a graceful shape, a direct lineal descendant of the Chalcidian amphora³ in type. The foot is joined to the body by means of a plastic ring from which rays ascend. The handles are round and ribbed and light in character, and the lip is offset with a delicate channel at the mouth. The neck is joined to the shoulder with a plastic ring.

The black varnish which covers most of the vase is of a lustrous character. The design on the neck is the honeysuckle pattern richly incised, doubtless a variation of that which is found on the neck of the Chalcidian amphorae referred to. The main design is on the shoulders of the amphora and is divided by the handles into two panels. Below these a reserved circle passes around the vase to the end of each panel, but not beneath the handles.

¹ Gerhard, *Auserlesene Vasenbilder*, pl. 314.

² Cf. p. 311, note 1.

³ Cf. Buschor, *Gr. Vas.*, p. 140; fig. 70, p. 97. Cf. also, *ibid.*, p. 138, fig., p. 99, p. 139. It was probably Amasis who introduced the amphora of the later Chalcidian type into Athens.

Next to the neck is a series of parallel framed bars of black and purple. The centre of the panel is occupied by a pair of prophylactic Ionic eyes. The imagination of the artist has further added the eye-brows and the nose to complete the decoration, and on either side bordering the design a male figure swathed

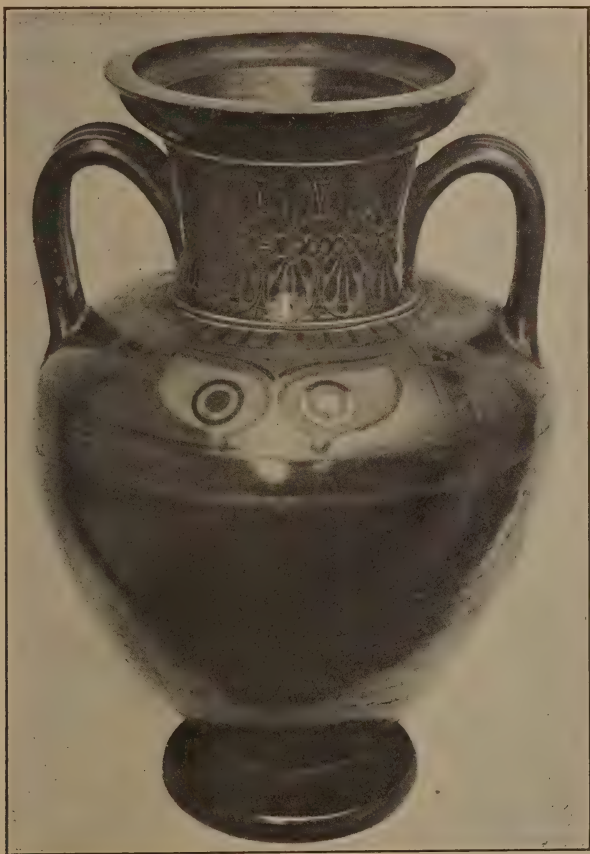


FIGURE 1.—AMPHORA IN BRYN MAWR

in a purple and black mantle stands as if “at attention” with a long staff or spear in the right hand. The design is practically the same on both sides.

The amphora is interesting because of its Ionic characteristics and its affinity with other known vases. It is undoubtedly from

the same workshop as an amphora in the Metropolitan Museum (Fig. 2) which shows even stronger Ionic traits. The New York amphora is of the same shape and has the same decoration on the neck and the rays below. The panel decoration, however,



FIGURE 2.—AMPHORA IN NEW YORK

is varied. On one side (Fig. 3) a lion is rending a stag¹; at either end, Ionic eyes. On the other side, a youth with a horse is shown between two other youths, with the eyes as before.

Ionic characteristics to be noted on our vase are: the drawing of the eye of men by means of the round circle without iris or

¹ Cf. this motive with motives on other vases showing Ionic traits,—e.g. Pottier, Louvre E 734, pl. 54.

pupil; the emphasizing of the contour of the back beneath the close-fitting garment; the distribution of the garments into layers of black and purple. These characteristics, combined with the peculiar shape of the head, abrupt in the rear with the hair caught up in a knot, together with the double line at the neck would seem to show that our vase was painted by an Ionic master working in the style of the "Phineus factory." The amphora dates after the middle of the sixth century.

IV. Part of a black figured cyathus (Fig. 4) with the signature of Nikosthenes (R 2463), from Rome. A companion piece (R 2464) is in the possession of the Boston Museum. The cup



FIGURE 3.—AMPHORA IN NEW YORK; DETAIL

is $2\frac{1}{2}$ inches in height, the clay a warm buff in tone and very fine. The high metallic handle has been broken off, but two pieces are preserved. At least one half of the cup is missing. The interior is covered with black varnish, and the handle is done in a very lustrous black on the outside. The cup corresponds in shape to a cyathus in the British Museum.¹ It shows the influence of metal technique seen also in the amphorae of Nikosthenes, and, with its fine clay and thin walls, is a good example of the potter's art. The design is that of a man driving a bull. At the left of the handle in front of the bull is the signature NIKOΞΘ.

The herdsman wears a pointed cap and a purple and black mantle, with a border of white dots, thrown over his right arm and shoulder. In his left hand he carries a cudgel (?) with a

¹ *Br. Mus. Cat.* II, pl. VII.

round object at the end, and in his right a long, pointed stick. The eye is rendered by a simple circle, the mouth by a short, straight line. The collar bones are indicated. The bull is realistically drawn, as we find the drawing in a similar scene on a cup by Nikosthenes in Berlin.¹

The chief claim to interest that our vase has is the fact that it adds one more signed vase to the large number already known from the prolific factory of Nikosthenes. Further, it is one of



FIGURE 4.—CYATHUS SIGNED BY NIKOSTHENES

four vases of this shape signed by Nikosthenes. Klein² cites two vases of this shape signed by our master, but neither has been published, nor are the present possessors known.

More recently the British Museum has obtained a cyathus from the factory of Nikosthenes with designs of Sileni and Maenads dancing,³ apparently similar to Klein's No. 54; his No. 55 presents a scene of combat between a warrior and an Amazon placed between two male figures who hold their horses. Our cup offers a more plebeian subject.

¹ *Wiener Vorlegeblätter*, 1889, pl. VII, 2a; cf. Gerhard, *Trinkschalen und Gefässe*, pl. 1.

² Klein, *Meisters.*, p. 66, Nos. 54, 55. Cf. Perrot, X, p. 262, who mentions only the London cyathus.

³ Walters, *J.H.S.* XVIII, 1898, p. 292, pl. XVII, 'On some Vases Recently Acquired by the British Museum.'

V. Fragments of Cabeiric Pottery from at least two vases, (R 325 a, b, c, f, h, i). No provenance is given, though the vases must have come originally from the site of the Cabeirion near Thebes in Boeotia (Fig. 5).

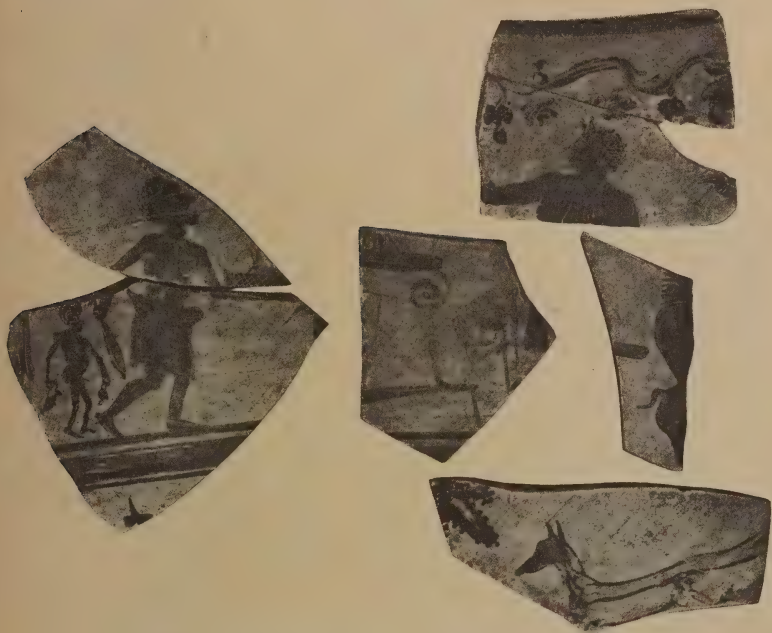


FIGURE 5.—FRAGMENTS OF CABEIRIC POTTERY

The clay is of a pale yellow variety with designs in black and brown. The scene depicted is that of a sacrifice. A grotesque male figure with a sacrificial basket in his left hand and a knife in his right moves apparently toward an altar. Behind him a small boy with oenochoe in one hand and sponge-bag (?) in the other follows with some trepidation. The man's mouth is wide open as if shouting and immediately before him is apparently a satyr. In any case the edge of the fragment seems to show the back and tail of a satyr, a design similar to one found on another fragment which appears to belong to the same vase. Yet another fragment which doubtless has to do with this scene represents an elongated animal running to the left. Of better quality is a fragment of another vase which depicts the head of the deity Cabeiros who is moving to the left with vine decoration above.

The incision is exceedingly careful. At the extreme right is a hand holding a double flute.

The fragments are good examples of the local development of the black figured ware at the sanctuary of the Cabeiroi. Excellent specimens of this pottery may be seen in the Boston Museum.¹ The characteristic shape is the large deep bowl with two small ring handles. The ware is not earlier than the fifth century and may be later, the old style being kept for religious purposes.



FIG 6.—FRAGMENTS OF AN AMPHORA

VI. Fragments of a large black figured amphora, No. 66 from Dr. Hartwig's fragments (Fig. 6). The design represents a quadriga, behind which the lower part of the figure of a woman is visible, standing before a seated old man with a staff in his right hand. Behind the man a barbarian with high pointed cap moves to right looking back to left. In his left hand is a battle axe.

¹ Professor D. M. Robinson of Johns Hopkins University is preparing for publication an account of caricature and the grotesque in ancient art which includes a discussion of these vases. See, also, Walters, *Anc. Pottery*, I, p. 391; *Ath. Mitt.* 1888, pp. 412-428, pls. 9-12; *J.H.S.* XIII, 1893, pl. IV, pp. 76-87; Perrot, *Histoire de l'Art*, X, p. 294.

The scene may be that of the departure of a warrior, a not uncommon theme,¹ or it may have some mythological significance.²

The amphora is to be dated some time after the middle of the sixth century. The use of purple and white is extensive; the incision is careful but scant. Folds are represented on the old man's himation.

VII. Six black figured shards from three prothesis vases, R 1930, 1931. One fragment from Athens gives the head and body of a woman who is tearing her hair in a fashion not unlike the design found on a clay tablet from the Acropolis.³ Two other shards show a frieze of male mourners with upraised hands.⁴ The third group of fragments, probably belonging to one vase show a weeping woman beneath a couch; two bearded male figures with upraised hands, one with white hair and beard; the heads of two youths with extended hands.



FIGURE 7.—FRAGMENT BY THE MASTER OF THE PHINEUS CYLIX

VIIIa. Fragment of an amphora in Ionic style from the hand of the Master of the Phineus cylix in Würzburg (Fig. 7). Design, heads of woman and man with typically Ionic profiles—especially in drawing of the eyes and hair, Ionic influence is also apparent.⁵ The fragment is to be compared with the Phineus cylix where precisely the same type of profile with the weak, receding chin is found on the women, where the treatment of the hair is the same, with the purple fillet about the head and the hair falling

¹ Pottier, *Louvre Album*, F 198, pl. 77; esp. *Mon.* 1842, pl. XLV, Quadriga of Kallias, Br. Mus. B, 147.

² Cf. Gerhard, *Auserl. Vasenb.*, 215, Ajax, Teucer, Brisëis, Phoenix; cf. for Trojan Warrior, *Mon.* IX, pls. IX-XI, -B 426, Br. Mus. cylix.

³ *Ant. Denk.* II, 11, No. 1.

⁴ Cf. Collignon-Couve, *Cat. de Vases peints du Musée National d'Athènes*, pl. XXXV, 845, 847 (pinax), 'Εφ. 'Αρχ. 1888, pl. XI.

⁵ Perrot et Chipiez, *Hist. de l'Art*, X, p. 209, for form. Furtwängler-Reichhold, pl. 41; Buschor, pp. 102 ff.; cf *supra* on III. Mr. Beazley considers this fragment very important because the vases of this school are mostly cups. Other vases from the same factory, which are not cups, will be discussed in his forthcoming book on Vases in America.

free behind. The use of red on the lips and in the pupil of the eye are to be noted on our vase, as well as the retention of the double line around the neck. The head of the male figure is very like the heads of the Harpies in execution, the treatment of the hair is the same, and the use of purple to denote folds of the garment is also found on our vase. White has been used across the front of the male figure to denote the under garment but much of the coloring is lost. The vase fragment is undoubtedly

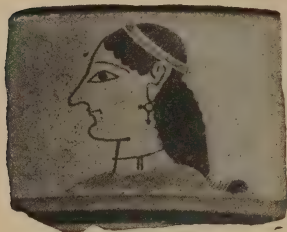


FIGURE 8.—FRAGMENT IN THE STYLE OF SAKONIDES

by the master of the Würzburg cylix.

VIIIb. Fragments of vases by the "Kleinmeister."

(a) Fragment of a cylix with a doe grazing: in the field, meaningless letters—style of Tleson.¹

(b) Fragment of a cylix from Cervetri, No. 4, Dr. Hartwig's fragments (Fig. 8); design, head of a woman in the style of Sakonides. The head is rendered in outline drawing and is turned to the left. The

bust is given as far as the shoulders. The upper part of her tunic is a purplish red and there is a purple fillet about her head. Her hair hangs down her back and is fastened in a knot by a tight band. The woman wears earrings and a necklace. Incision is rare, but some is found on the hair to represent bands. The painting is a lustrous black. The fragment is rare and is practically a duplicate of the design on a cylix in the British Museum.²

(c) Fragments of cylices with offset neck. At handle, small meander. Design of animals in panel around vase, panther, sphinx, ram. Style of Xenocles.

(d) Small fragment of a warrior with shield and spear.

(e) Fragments of cylices in the style of the Kleinmeister with Dionysiac scenes—Themes: Dionysus on a mule with vine branches; satyr.³ Dionysus seated with *keras*⁴ between prophy-

¹ Gsell, *Fouilles de Vulci*, pl. IX; cf. de Ridder, *Cat. de vases peints de la Bibl. Nat.* 315, pl. VIII. Perrot et Chipiez, *Hist. de l'Art dans l'Antiquité*, X, p. 197 (Exekias); p. 235 (Anacles).

² *Arch. Zeit.* 1885, p. 189; Cf. *Jb. Arch. I.* XXII, 1907, p. 102, fig. 19 (Hermogenes), fig. 21 (Sakonides). See also *Jb. Arch. I.* XI, 1896, p. 289, fig. 23 (Eucheiros). Pottier, *Vases Antiques*, F 87, pl. 69, signed by Hermogenes.

³ Cf. Attic cylices in the Metropolitan Museum with same theme and better execution.

⁴ Louvre F 160, Pottier, *Vases Antiques*, pl. 76 (oenochoe).

lactic eyes. Dionysus with vine. The use of the vine for decoration Buschor believes was introduced by Amasis¹ from the Phineus factory into Athens.

(f) Fragment of a hand holding a cylix.

(g) Fragment showing a fighting cock. Copious use of incision and purple.

Turning to the works of the period of red figured vases, and passing over a fragmentary inscription from a Panathenaic amphora (-NEΘEN), we come to the cylices of the severe red figured style.

IX. Centre of a red figured cylix of the early severe style, with base.² RTL18a 19, from Rome. Within a reserved red circle is a kneeling warrior with helmet, shield, spear and greaves. The figure appears to be crouching in ambush and is completely hidden by his armour except for his feet. In the field, ΗΟΓΑΙ< ΚΑΛΟ< retrograde. Only < remains of the word *καλός*. Two incised circles surround the shield, near the edge; within, a design of three leaves. The cylix is Epictetan in style.

X. Red figured cylix (Fig. 9) from the workshop of Euergides.³ Diameter 0.115 m. One handle is missing and the foot has been broken away. In the interior surrounded by a simple circle is a nude youth kneeling and lifting a cotyle. The outline of the figure is done in relief except the contour of the hair. This is distinguished from the background merely by dots in relief. The short, loose hairs about the face are dark, straight strokes without relief. The profile is typical of Euergides, with the long nose, prominent chin and receding mouth. The body and legs are thin. Our vase should be compared especially with Berlin 2265, which depicts a youth with a cotyle,⁴ and the cylix in New York, which shows a youth holding a flower.⁵ The work of the entire vase is very hasty. The ear space is reserved in the hair with no details; no marks indicate the ankle. The cylix is interesting chiefly because it comes from a prominent factory—one of the most prolific factories of the Epictetan period.

¹ Buschor, *Gr. Vas.*, p. 140.

² For the form see Pottier, *Douris*, fig. 1, cylix to the r. For similar subject, Hartwig, *Meist.*, pl. 9; *Jb. Arch. I.* X, 1895, p. 192, fig. 17, p. 194, No. 18, Louvre, G 5, pl. 89, Pottier.

³ For a discussion of this master, see Beazley, *J.H.S.* XXXIII, 1913, pp. 347 f.

⁴ *J.H.S.* XXXIII, 1913, p. 351, fig. 3.

⁵ *B. Metr. Mus.* V, No. 6, p. 142, fig. 1.

XI. Red figured cylix with the *καλός* name Epeleios, perhaps from the workshop of Cachrylion¹ (R 1335 B.B. 16, 2). Height 0.121 m.; diam. 0.324 m. The vase was excavated in a tomb at Vulci, north of the Cuccumella, by Prince Torlonia and was afterwards in the Torlonia Palace.² Two small pieces were missing



FIGURE 9.—CYLIX FROM THE WORKSHOP OF EUERGIDES

near the handle, and the vase was put together from numerous fragments.

On the interior (Figs. 10, 11), a youth crowned with myrtle and wrapped in a mantle that leaves the right shoulder free, leans on a knotted staff held in his left hand. His right arm is thrown back in an awkward fashion probably for the sake of filling the space desired. A single circle reserved in the color of the clay surrounds the design; around the interior to the right of the youth is the inscription ΕΓΕΛΕΙΟΣ; to the left in retrograde fashion ΚΑΛΟΣ ΒΑΙΧΙ. The staff and fillet are done in purple.

¹ Gsell, *Fouilles dans la Nécropole de Vulci*, 1891, pls. XIII-XVI; pp. 178-185. A chapter on the Epeleios master will be found in the forthcoming book by J. D. Beazley referred to above.

² Klein, *Griechische Vasen mit Lieblingsinschriften*, p. 65, Epeleios.

Exterior (Figs. 11, 12). (A) In the centre a bearded man, (a), crowned with myrtle and wrapped in a mantle that leaves the right shoulder free, is seated on a stool facing right. He holds up both hands gesticulating to a youth before him (b). The youth is crowned and dressed like the central figure, except that his mantle is decorated

with a trefoil pattern; he holds up a flower with his right hand and has a staff in his left. Behind the man is a second youth (c), similar in costume to (a) and in pose to the figure in the interior of the cylix. To the right of this central group are two youths in conversation, similar to those already described; (d) moves to left, looking back to right, and holding out



FIGURE 10.—CYLIX WITH NAME EPELEIOS;
INTERIOR

his left hand as if in protest; in his right hand he grasps a knotted stick; (e) repeats (b) fairly closely in pose and dress, though the view is more nearly a three-quarters back in (e). To the left of the central group another group of youths in conversation; the youth (f), repeating (e), is in conversation with a seated youth at the left. There is little variety in the figures and very few poses are employed by the artist.

(B) Three groups of youths in conversation: (a) wreathed with myrtle and wearing a mantle that leaves the right shoulder bare, moves to left looking back to right. In either hand, a knotted stick is held. He escapes from a second youth (b) who holds out his right hand toward him; (c) sits on a stool with his mantle wrapped about his waist and legs. In his right hand is a flower, while his outstretched left holds out a cane; the youth before him (d) shyly hides his head behind his left shoulder and

rests his left arm on his staff over which his mantle is draped. In his left hand he holds up a flower. The next figure (e) moves hastily to left looking back to right, and remonstrating with his



FIGURE 11.—CYLIX WITH NAME EPELEIOS (after Gsell)



FIGURE 12.—CYLIX WITH NAME EPELEIOS (after Gsell)

left hand with (f). The latter wears his hair long and holds out his right hand toward the youth before him.

Inscriptions are numerous on the vase and were doubtless used for decorative effect.¹ On A the following inscriptions:

¹ Hartwig, *Meisterschalen*, pp. 97 ff., citing our vase.

[Θ]ΕΟΔΩΡΟΣ. ΝΑΙΧΙ ΚΑΛΟΣ. ΗΘΡΑΙΣ ΚΑΛΟΣ. ΕΓΕΛΕΙΟΣ
ΚΑΛΟΣ ΝΑΙΧΙ ΗΘΡΑΙΣ ΚΑΛΟΣ. On *B*: ΙΣΡΑΧΟΣ ΚΑΛΟΣ.
ΕΓΕΛΕΙΟΣ ΚΑΛΟΣ. ΝΑΙΧΙ ΗΘΡΑΙΣ ΚΑΛΟΣ.

Some of the inscriptions are retrograde. Purple is used for the fillets of myrtle. Klein cites the vase under the name Epeleios¹ and mentions two other vases in Munich which have the same *καλός* names.

Where does our cylix belong in time, who was the master, if he can be determined, or what master's work is most like the work found on this cylix?

If we consider the technical details found on our vase, the following characteristics may be noted.

(a) The designs are enclosed inside and out by the simple circle which was used in the Epictetan era. In the interior around the edge of the bowl is a reserved red line.



(b) The drapery is very formal, the folds presenting a starched effect and the ends done in swallow-tail fashion. In one instance the end is rendered by the point with a circle within. The trefoil pattern is used in two cases. As a rule the mantle leaves the right shoulder bare and covers the left arm almost to the wrist,—sometimes entirely. Circular folds are done in two divisions.

(c) The outline of the hair is almost always incised, except for the lock over the forehead, which has a reserved line around it. The hairs about the face are done in short straight lines, except in three cases; in two instances the youths have curls about the face, and one has long hair done in wavy lines. One youth has curls in raised dots about the face. All wear purple fillets of myrtle.

(d) The eye is almost always closed at the ends with the pupil in the middle; this is rendered by a dot except in two cases where we have the round circle with a dot in the centre.



(e) The collar bones do not have the curved line but form part of the breast. The breasts are also

rendered so:  , and  ; nipples

are done by circles with dots within in a brownish wash. The trunk is marked off into two divisions.

(f) The feet are long and narrow. The hands for the most part are poorly done, the ends often being cut off sharply by the black

¹ Cf. p. 322, note 2.

varnish. They are stiff, except when they grasp objects. One outstretched hand, (*d*) of side *A*, has a line to mark the thumb and a relief line in the centre of the palm. The arms are over-long.

In comparing our cylix with works from the hand of Epictetus we find certain traits in common: the single figure in the interior surrounded by the simple circle, incision for the outline of the hair, similar treatment of drapery, and a marked tendency toward grace and refinement. The figures of our cylix are, however, more sturdy and virile, and advances over the work of Epictetus are apparent.¹

The vase obviously belongs to a period when new and old traits existed side by side, a period of swift stylistic development which is best revealed in the work from the factory of Cachrylion. One vase which resembles ours is G 36 in the Louvre.² The drapery and poses are similar, though the mantles are longer and the work less careful. The three-quarter back view in particular recalls our cylix. Closely allied to our vase in details is a cylix in Munich³ made by Cachrylion and painted by Euphronios. In the interior the beautiful Leagros is celebrated, riding in Thracian costume on his horse. The shape of his skull and his profile are reminiscent of some of the youths on the exterior of the Bryn Mawr cylix, while the companions of Heracles on the exterior show a certain kinship with them. Iolaus and the bearded man on the Bryn Mawr cylix are akin. Furthermore, the treatment of the hair of the female figure who rushes to the scene with outstretched hand recalls the hair of (*e*) and (*f*) of side *B* of our vase.

The closest parallel to our vase is to be seen in the design on the reverse of the Antaeus crater in the Louvre,⁴ the concert

¹ See especially the following works of Epictetus for points of similarity: (1) Berlin 2262=Gerhard *A.V.*, 272. The treatment of the hair and muscular details are similar and the repetition of the flute player recalls a like trick on the Bryn Mawr cylix. (2) Cylix, Cab. Pourtalés, Panofka, pl. 41. (3), Br. Mus. E 36, Murray, *Designs*, No. 21, pl. VI, "in the style of Epictetus," where the garment, staff and profile of the youth are similar.

² See, Louvre *Album*, G 36, pl. 91. Among unsigned vases, cf. also, Furtwängler, *Sabouroff Collection*, pl. LIII; *J.H.S.* 1904, p. 305, No. 520; *J.H.S.* 1908, p. 316, pl. XXXI.

³ Furtwängler-Reichhold, pl. 22. The caveat of Furtwängler, *op. cit.* I, p. 104 and II, p. 11 has been noted.

⁴ Furtwängler-Reichhold, pl. 92.

scene. Here the youths are strikingly like some of those on the Bryn Mawr cylix though done on a far more elaborate scale. (d) of the Bryn Mawr cylix, side A, resembles the handsome Leagros in the profile face with full pouting lips, in his knotted stick with slightly curved end, in his delicately draped garment, his side whiskers and myrtle wreath, in small details such as the rendering of the elbow, hair and eye. Note also the seated youth (c) on side B, comparing him with the youths seated at the concert.

In spite of many marked similarities, Euphronios was not the painter of the Bryn Mawr cylix. A careful examination of our vase reveals many characteristics of the period transitional from the archaic, refined and conventional work of Epictetus toward the bolder, more virile style of the new school under Euphronios. One bears in mind, however, the *caveat* of Furtwängler¹ against assigning all vases of this period to that painter, and the angular figure on the interior of our cylix could scarcely come from his hand. Furthermore some of the main features which Furtwängler points out as characteristic of Euphronios are missing on our vase, namely, the manner of rendering the trunk muscles and the line on the breast on the outer side from the nipple. Perhaps the cylix was painted by another worker in the factory of Cachrylion who copied the style of Euphronios; it is scarcely possible that it was painted by Euphronios even as an amateur before he launched forth on his independent career and started a workshop of his own.² At most it can only be said that the vase appears to emanate from the factory of Cachrylion and to belong to the period when Euphronios was a worker there.

The relation of our vase to others with the *καλός* name Epeleios, raises further problems. Are all of these vases by the same hand? Turning to the Munich vases mentioned by Klein we see that they are concerned with the following subjects:

1. Munich, 469. The design is that of a Maenad, serpent in right, thyrsos in left. She wears a long fine chiton and a crown in her hair. In the field, ΕΓΕΛΕΙΟΣ ΚΑΛΟΣ. Jahn describes the vase as "zierlich."

¹ See p. 326, note 3.

² On Cachrylion and his relation to Euphronios, Loeschke, *Anhang in Helbig, Italiker in der Po-Ebene* (1879), p. 125: Furtwängler-Reichhold, pl. 22 (Text). Cf. other vases by Euphronios with our vase, notably Furtwängler-Reichhold, pls. 61, 62, particularly the work on the neck which is more hasty; Hartwig, pls. VIII and XII.

2. Munich, 331.¹ I. A bearded, ivy-crowned satyr presses with both hands a wine-skin; from this, wine streams into a large ivy-crowned amphora. Inscription, <ΙΛΑΝΟΣ ΤΕ ΔΡΟΝ ΗΕΔΥ< ΗΟΙΝΟΣ. Below ΕΓΕΛΕΙΟΣ ΚΑΛΟΣ.

Exterior: A, Peleus and Thetis and five fleeing Nereids. Peleus bearded and crowned and clad in armour embraces Thetis who pushes him away. She wears a transparent chiton, a mantle and a crown. On her arm is a lion. Various Nereids come to the aid of Thetis, ΧΟΔΑ, ΓΑΛΥΚΑ with dolphin, ΙΡΙ<ΙΑ, with dolphin, and ΚΥΜΑΤΟΘΑΙ. All wear the Ionic chiton. Under the handle is an altar in the form of an Ionic capital on which an altar fire burns.

B, Seven drunken tipplers. Beside an amphora stands a youth, ivy crowned and wearing a short chlamys. He places a cup to his mouth with his right hand. Opposite him, a bearded man in mantle and cap holds a lyre over the amphora. Between them, the inscription, ΕΓΕΛΕΙΟΣ ΚΑΛΟΣ. Behind the man two figures; a bearded man with a chlamys over his left arm and a drinking horn in his right holds out his left hand toward a nude youth who draws backward. The youth holds a wine skin behind him; above him, the inscription, ΘΕΟΔΟΡΟΣ ΚΑΛΟΣ, ΗΟΓΑΙ< ΚΑΛΟΣ ΝΑΙΧΙ. To the left of the youth drinking is a youth about to cast aside or draw on his mantle. Two youths follow—one clothed in a chlamys and bearing a cane moves toward a nude youth who pushes him away. All three are ivy-crowned. Above, Ο(ΓΑΙ< ΚΑΛ)ΟΣ ΝΑΙΧΙ Ι<ΠΑ+ΟΣ² ΚΑΛΟΣ. Under the handle a great amphora.

To these vases should now be added two in New York.

3. Cylix in New York in the Metropolitan Museum.³ Diameter, 33.6 cm.

Interior: Nude youth running holding out his chlamys over one arm and grasping his staff in the other hand. On his head, a myrtle wreath. Inscription, ΗΟΓΑΙ< ΚΑΛΟΣ.

Exterior: Scenes of revelry with ten youths engaged.

A, In the centre, two nude youths at either side of a crater. The one at the left has a cane in his right hand and a mantle over his left arm. The one at the right dips into the crater with his

¹ Jahn 331; Canino, *Rés. Étr.*, p. 22; De Witte, *Cat. Étr.*, 135.

² Kretschmer, *Gr. Vaseninschriften* p. 180, changes to Isarchus. Cf. Klein *op. cit.* p. 65.

³ For (3) see, *B. Metr. Mus.* Vol. V, No. 6, June, 1910, 142, fig. 2.

right and holds a flute skin in his left. Both are filleted. To the right of this group, two nude youths, one with a mantle over his left arm, the other with an oenochoe in his right and a cane over which his chlamys is hung, in his left. At the left, behind the central group, is a nude youth moving left with a wine skin held out in both hands.

B, A livelier scene of dancing. In the centre, a youth with castanets and a mantle behind his shoulders dances to the flute played by a youth at the left. The player faces a second youth at the left with a mantle thrown over his left arm. At the right of the central figure two youths dance, one with a horn, the other with a bowl and pointed amphora.

Inscription $\text{HOPAI} \leq \text{KALOS} \leq \text{EP} \leq \text{ELEIOS} \leq \text{HOPAI} \leq \text{KALOS} \leq \text{VAIXI}$.

4. Red figured crater in New York in the Metropolitan Museum.¹

A, Bearded warrior and youth in conversation.² The bearded warrior has a most realistic portrait head which dates the crater in the Polygnotan era and recalls the bearded figure wearing a petasos on the Orvieto crater.

B, Hunter and Nike. Between the two figures at the top is an inscription $\text{EP} \overset{\leq}{\text{EAE}}$. The letters indicated by dots are uncertain, but very likely are *l* and *O*. No *καλός* is traceable.

An attempt to compare the styles of the various vases reveals certain difficulties. The New York cylix (3) shows certain similarities to our vase, but such as might be due to the same period rather than to the fact that they come from the same hand. Incorrect anatomical details are very noticeable on the New York vase, whereas the Bryn Mawr cylix is free from these; awkward as the figures sometimes are on our vase, there is no incorrect rendering of the back of the arm seen in front view, as is the case on the interior of the New York cylix. The drapery is also quite differently treated.

If we decide that the New York cylix may have been painted by the master of the Bryn Mawr cylix in his early period before he had learned the correct drawing of anatomical details, we must contend with the reserved line used about the hair in the

¹ I owe the reference to Miss Gisela M. A. Richter of the Metropolitan Museum.

² Furtwängler-Reichhold, II, fig. 94A; Buschor, p. 183, fig. 133.

interior of the New York cylix; the reserved line is usually later in date than the incised.

Turning to the Munich vases we have a distinct lacuna because no illustrations are available.¹ Reasoning from analogy and probability we come to the following conclusions:—It is highly probable, though not absolutely certain, that Munich 331 is by the same master as the Bryn Mawr vase, because the numerous inscriptions on the two vases are identical and are found in combination on no other known vases; three *καλός* names are repeated of which but one, Epeleios, is found on other vases. Further, these names are repeated with the phrase *ὁ παῖς καλός. ναίχι καλός*. It seems, therefore, that the two vases might probably emanate from the same master, since they have the same tendency to use similar inscriptions for decorative purposes.

If the Munich vase 331 belongs to the same master as our cylix we have a second problem before us. Side *B* of the Munich cylix has a scene of revelry which is very close in character to the scenes depicted on the exterior of the Epeleios cylix in New York and which would seem to connect the New York and Munich vases with the same hand.

It appears, therefore, probable that the Munich vase 331, the Bryn Mawr vase, and the New York Epeleios cylix are to be connected with the one master but this can in no way be proved in the absence of illustrations.² The New York vase, if it is to be reckoned from the same hand as the Bryn Mawr cylix, certainly shows very hasty and careless execution as compared with the latter, though there are certain similarities in style. On the other hand as careful a workman as Epictetus sometimes attaches the arm at a peculiar angle and gives the hand in a rear view where we should have the front view.³

The New York crater cannot be connected with our group of vases. The inscription is uncertain;⁴ the style is certainly that of the Polygnotan era.

¹ The photographs of the Munich vases sent to me by the kindness of Professor Sieveking have failed to reach me.

² Mr. Beazley tells me that he considers the Munich vase 331, the New York vase, and the Bryn Mawr vase to be by the same hand. Three other vases from the same hand will be added to the work of this master in the chapter on the Epeleios Master in Mr. Beazley's forthcoming book. The small Epeleios cup in Munich (469) is, according to Beazley, not by the same master.

³ Cylix in Ferrara, *A.J.A.* XVI, 1912, p. 271, fig. 3.

⁴ Beazley considers this a nonsense inscription. Cf. *J.H.S.* XXXIV, p. 205, in his discussion of the "Achilles Master."

The Bryn Mawr vase can scarcely be earlier than 510–500 B.C.,¹ the New York crater scarcely earlier than 460 B.C. Between



FIGURE 13.—CYLIX IN THE STYLE OF DURIS; INTERIOR

the vases lies a period of forty years. It is interesting to see the same name recurring at a later epoch but it is certainly another Epeleios, if the inscription is genuine.

XII. Centre of a red figured pinax in the style of Duris, R 491, from Rome, diameter 0.153 cm. (Fig. 13).

Within a reserved red circle, the edge of which has been broken away, a bearded man reclines upon a couch. His left arm rests against a cushion and his right hand holds a kylix with which he is evidently playing kottabos.² He wears a fillet reserved in the color of the clay and is nude to the waist. His himation covers

¹ Furtwängler-Reichhold, *Gr. Vas.* I, p. 100.

² Jahn, *Philologus*, 1869, p. 201, 'Kottabos auf Vasenbildern'; Klein, *Euphronios*, 'Die Kottabos Vase,' pp. 104 ff.

the lower part of his figure. On the wall at the left a spotted flute skin is hung.

The pinax is a very fine piece of work and shows close resemblance to the painting of Duris. The head has the shape found in the figures of Duris¹ and the hair with the reserved wavy line is also characteristic of the same painter. If we examine in detail various similarities we find that the anatomical details follow

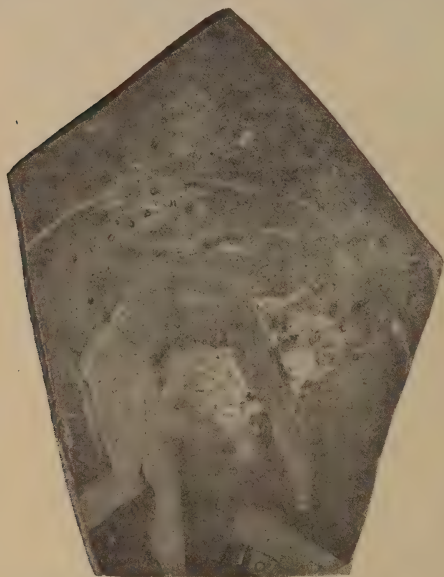


FIGURE 14.—FRAGMENT IN THE STYLE OF DURIS

very closely the style of Duris,—the lines of the breast with the peculiar little triangle in the centre, the relief lines of the abdomen and hip,² the hand with the relief line along the thumb, the three lines in a dilute wash to mark the muscles of the forearm, the slender arms and sharp defining of the elbow. Similar also is the rendering of the hair about the face and neck, the drawing of the mustache and beard, the rendering of the nostril and ear. The drapery should be compared with that on a cylix in

Boston signed by Duris and decorated on the exterior with representations of satyrs and nymphs dancing.³ Finally, the general proportions of the figure mark it out as especially close to the figures of Duris, and it is quite possible that the pinax is a work from his hand. Around the interior is the inscription, HΟΓΑΙΣ ΚΑΛΟΣ . The red slip is partly peeled off, perhaps through lying in the sunlight.

XIII. Interior of a cylix in the style of Duris, R 38, from the Van Branteghem collection and said, perhaps erroneously, to

¹ Cf. especially, Furtwängler-Reichhold, pl. 54 (cylix in Vienna).

² See also cylix by Duris, in the Boston Museum: Interior, bearded man dancing. Exterior, carousal scenes.

³ Interior, Dionysus at an altar.

have come from the Acropolis at Athens.¹ Within a reserved red circle a nude youth wearing a helmet and one greave is in the act of putting on a second greave. The figure is bent slightly forward to fill the space neatly. At the right, part of a stool with a cushion upon it is seen. Around the design is the inscription, HOPAI\S KALOI\S . The preliminary sketch which was altered in painting is very noticeable. The exterior presents the lower parts of three figures. All wear greaves and two seem to bear spears. One is nude except for a mantle behind his shoulders.

The figure bears the marks of Duris' style in its slender trim proportions, in the eye drawn with the circle and dot,² and in the anatomical details.

XIV (PLATE XIII). Interior of a cylix by the Master of the Bald Head, or Briseis Master.³ The fragments are No. 71a-d from Dr. Hartwig's collection. On the interior, which is surrounded by a simple meander, a bald-headed man with a rough beard is seated in a chair at the left. He holds out a staff in his raised right hand while his left hand is hidden beneath his garment. He wears an himation with sleeves which have a double engrailed edge, and a black bordered chiton above. Around his head is a purple fillet. Before him a male figure wearing a black-bordered himation leans on a knotted stick which rests under his left arm. His head and right hand are missing, but he apparently holds out a helmet the tail of which is visible. The vase is obviously a work from the hand of the "Meister mit dem Kahlkopf," as Hartwig terms him, or the "Briseis Painter," as he is named by Beazley from his important work in the British Museum. Our vase is nearest in style to the vase in the British Museum.⁴ The earmarks of this master are evident in the rendering of the bald head, the beard done with dots in a dilute wash and the hair. The scenes on the exterior are almost all lost. They represent seated figures apparently in conversation with men standing or leaning on canes. The fragments are badly in need of cleansing and putting to-

¹ Van Branteghem Sale Catalogue No. 71.

² Beazley, *J.H.S.* 1914, p. 189, considers that the dot and circle eye indicated a light-colored eye.

³ According to Beazley, the "Meister mit dem Kahlkopf" does not exist. The Briseis painter will be discussed, and a list of his works will be given, in Beazley's forthcoming book.

⁴ Hartwig, *Meisterschalen*, XLII, cylix in the British Museum; Murray, *Designs*, XIII, 52.

gether anew. They form, however, a very interesting addition to the work of this master.

XV. Fragment of an amphora by the Master of the Berlin Amphora,¹ R 1087, from Rome (Fig. 15). The design is the head



FIGURE 15.—FRAGMENT OF AMPHORA BY THE MASTER OF THE BERLIN AMPHORA

of Athena in an Attic helmet with plume facing left. She wears an aegis with snake heads about the edge and spots in a dilute wash. The hair is done in long, wavy curls somewhat conventionalized.

XVI. Fragments of a cylix by the "Meister von Capua." R 1837, formerly in the Bourgignon collection, no provenience given (Fig. 16). The

exterior scene represents a symposium; of the interior only the filleted head of a bearded man is visible with a basket on the wall. The three fragments show two youths and two bearded men reclining at a banquet with a small cup bearer serving at the right. They are nude to the waist and wear thick dotted fillets about their heads. The beards and profiles of the figures are quite individualistic; the head is long and quite narrow and the hair is done in straight, stringy locks which present a somewhat unkempt appearance. The beard of the men is rendered in the same fashion.

This artist, although he never signs, is known by a number of vases and has been named by Dr. Meyer, "Der Meister von Capua." Three cylices from his hand are in the Boston Museum. Our vase closely resembles in style one of these, which is in case 18 and may be described as follows:—Interior: bearded man and youth. The man wears a mantle which has fallen behind his back and rests on his arms. In his left hand is a cylix, in his right a staff. Before him stands a nude youth holding out an

¹ For an account of this master, see Beazley, *J.H.S.* XXXI, 1911, p. 281. The fragment is given in pl. X, but assigned to the Boston Museum.

oenochoe in his right hand. The forms are slender and elongated, the eye is the profile eye with lashes. Exterior: Bearded men and youths in conversation. They have various drinking vessels and staffs in their hands, and the characteristic fillet described



FIGURE 16.—FRAGMENTS OF A CYLIX BY THE "MEISTER VON CAPUA"

above. The palmette is triple, with scrolls and leaves at the end. The drawing is unusually fine.

The other two cylices show scenes of revelry:—(2) has design of maenads and satyrs, (3) youths and bearded men in conversation. In addition to these two vases are two cylices in the Louvre, room H, case H, 382, 383, a vase in the Somzée Collection¹ and one in Bologna² from the same hand. The latter appears, like the Bryn Mawr vase, to have presented the scene of a symposium both outside and in.

¹ Fürtwängler, *Somzée Coll.*, pl. XXXVI; *Somzée Sale Coll. Catalogue*, 1901, pl. I, No. 47.

² I owe the reference to Mr. L. D. Caskey. Pellegrini, *Catalogo dei vasi antichi dipinti*, Museo Civico di Bologna, p. 41, figs. 28, 29, 30.

XVII. Part of the interior of a cylix of the period transitional to the fine style, probably by the same hand as No. XVI (Fig.



FIGURE 17.—FRAGMENT OF A
CYLIX

17). T.L. 18a, 19 Rome. Two nude male figures of which the upper portions and heads are missing in part, stand on either side of a wreathed crater which rests upon a pedestal crowned with ivy. The figure at the left has a staff in his right hand and holds out his left hand, now missing. The figure on the right dips an oenochoe into the crater with his right and holds his staff in his left. Both wear mantles around their shoulders. Below the design a kind of egg pattern is visible.¹

XVIII. Interior of a cylix by the Penthesilea Master,² R 1827. Interior, victory flying

toward an altar. Exterior, scenes of combat between Greeks and barbarians.

XIX. Fragment of a red figured amphora, R 1088, bought from Professor Rhousopolos and marked 'ΑΤΤΙΚΗΣ (Fig. 18). The design belongs to a vase of the fine style and probably represents the well-known scene of Hephaestus led into Olympus by Dionysus. At the right a satyr bearing a vine-wreathed amphora on his shoulder advances to the right. Only the head of the figure is preserved. Behind him, Dionysus with fillet and thyrsus, clad in chiton and himation, looks to the left though apparently moving to the right. He is doubtless drawing on the drunken Hephaestus. Above the design the lotus pattern. The scene is well known in the fine style of red figured vase

¹ Beazley assigns this to the painter of the "Euaion kalos" cup in the Louvre and mentions this painter in his book, where the Bryn Mawr fragment will be published.

² A.J.A. XIX, 1915, p. 403, pl. XVII. Beazley connects this vase with "a painter of the same time and, one may say, school as the Penthesilea painter. By the same, pyxis in Athens, with Poseidon and Amymone, Heydemann, *Gr. Vas.*, pl. I."

painting.¹ Our vase is in style most like a stamnus shown by Gerhard.² The vase was in a Roman antique shop when drawn and represents Hephaestus on a mule with a cantharus in his right hand. Dionysus has his cantharus and thyrsus while a satyr plays the double flute. Both vases are obviously by the same hand.



FIGURE 18.—FRAGMENT OF AN AMPHORA

XX. Fragment of a pinax in the fine style, from Athens, No. 3, Hartwig's frag-

ments, and noted as rare.³ In the interior within two reserved red circles a bearded long-haired satyr stands at the right in conversation with a woman at the left. His hands are folded across his breast and his right knee is bent in an easy position. The woman wears a kerchief about her head and a mantle over her chiton which covers her entirely. Both stand upon an exergue reserved in the color of the clay (Fig. 19).

XXI. Ascus from the middle of the period of red figured vases, ca. 450 B.C., provenience unknown. The form is that found in the earliest examples,—the flat, round body with convex top and a projecting spout; the handle is arched over to meet the spout.⁴ The ascus came into popularity as one of the styles which succeeded the cylix.

¹ Furtwängler-Reichhold, pl. 7, crater in Munich; pl. 29, pelice in Munich, *B. Metr. Mus.* June 1909, p. 105, fig. 8; Gerhard. *Auserl. Vas.* pl. 58, stamnus in the Fogg Museum, Cambridge.

² *Auserl. Vas.*, pl. 58.

³ Cf. Nicole, *Meidias et le style fleuri dans la céramique attique*, p. 115, fig. 26, for similarity in style.

⁴ Br. Mus. Cat. III, fig. 16, E 722-66; Walters, *Hist. of Anc. Pottery*, I, p. 199. The Boston Museum has an ascus similar in character to that in Bryn Mawr; on one side a dog, on the other, a hare. The work is more careless.

Design on the top: panther crouching to left with right paw raised; gryphon (?) crouching to right with left paw raised. On the body of the panther and along the back bones of both animals, dots in brown. The work dates from the good period of work and is fairly well done.

XXII. Miscellaneous fragments of the red figured style (Figs. 20, 21).



FIGURE 19.—FRAGMENT OF A PINAX

1. Head of helmeted Athena facing right, in the style of Olto^s,¹ from Rome. The treatment of the hair, eye and helmet ally the fragment closely with the style of Olto^s.

2. Fragment of the interior of a cylix in the Epictetan manner. Design, part of the head of a youth and the right hand holding a lyre. Inscription in the field LO.

3, 4, 5. Fragments of a cylix of the Epictetan cycle. Design, exterior, contests of Theseus. 4, Theseus and the Marathonian Bull.

¹ Cf. *Wiener Vorlegebl.* D, pls. I, II.

6. Fragment of a cylix of Epictetan style. Head of a youth facing left, probably engaged in a wrestling bout or in the palaestra.

7. Fragment of the interior of a cylix from the workshop of Euphronios. Design, lower part of a youthful figure in short transparent garment. The feet are missing. The figure is reminiscent of Theseus in the Euphronios cylix in the Louvre.¹ The figure may be drawing a bow or it may possibly be poised, as is the Theseus figure, on the hands of a Triton. The drapery follows that of the Louvre cylix in style.

8. Fragment of the interior of a cylix. Design, head of a youth facing right. The outline of the hair is marked by plastic dots; around the edge of the hair a dilute wash is used for curls. A meander pattern surrounded the interior design.

9. Fragment of the exterior of a cylix. Design, youth turned in a three-quarter back view, head to left. The hair about the face is rendered by several rows of plastic dots. About the head is a purple fillet. The eye is rendered by the circle and dot.² Style of Duris (?).

10, 11. Heads and shoulders of two youths belonging to the exterior of a cylix from the workshop of Hieron.³ The shape of the skull, the thick lower lip and prominent chin, the garment folds in heavy rolls as of woollen material, as well as the relief lines of the breast and neck, all connect the vase with the workshop of Hieron.

12. Head and shoulders of a bearded man, belonging to the interior of a cylix from the workshop of Hieron.⁴ The hair and beard are done in a lustrous black and the head is surrounded by a purple fillet. The vase fragment should be compared in style with a cylix in Boston which depicts bearded men, youths and maidens in conversation. (For other vases from the workshop of Hieron, see No. 27, Miscellaneous Fragments, *f.*)

13. B B 166 (15). Fragment of the exterior of a red figured cylix. Breast, with lion's paws, and beard of Heracles. The clay is unusually fine and the relief work of the best quality.

¹ Furtwängler-Reichhold, pl. 5.

² Pottier, *Douris*, fig. 8, Eos.

³ *Wiener Vorlegebl.* A, pl. III; *Jb. Arch.* I. 1891, pl. I; the painter in the workshop, according to Beazley, is Makron.

⁴ Hartwig, *Meisterschalen*, p. 279, fig. 40a, p. 280, fig. 40b, cylix in Boston. Beazley ascribes to Hermonax and gives a list of his works in his book. This is his only cup.

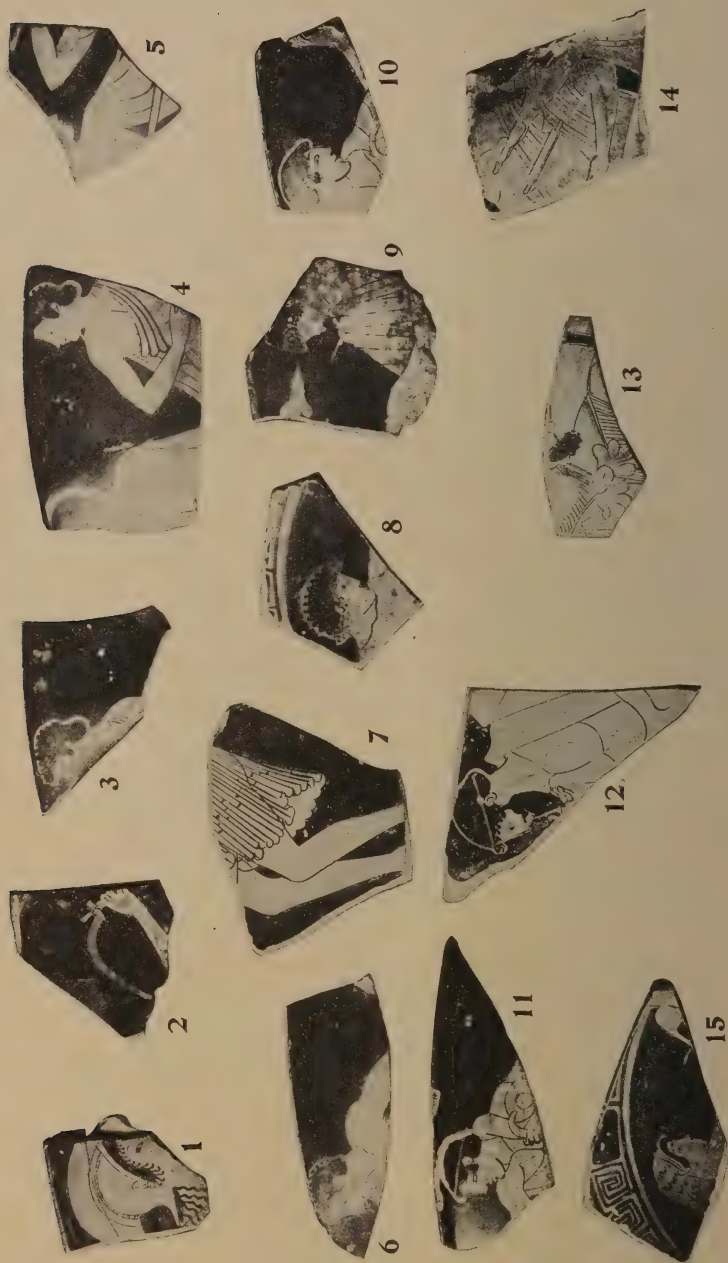


FIGURE 20.—FRAGMENTS OF RED FIGURED VASES

14. Fragment from a red figured cylix; exterior design. Bearded man with cotyle held before him in his left hand, head facing to the right. Left, outstretched hand of a second figure.

15. T L 18a 19. Head of a woman in sakkos, facing right, from the interior of a cylix. The design is surrounded by a meander varied by squares. The fragment is by the same hand as a cylix in Corneto.¹ The profile should be compared with that of the woman bidding the youth farewell. The sakkos is of the same type as that worn by the young woman who holds a bow in her left hand. The stripes of the cap are rendered by wavy lines in a dilute wash. The style is similar to that of Brygos.

16. Heads of two youths from the exterior of a cylix, No. 27, Dr. Hartwig's fragments. The fragment belongs to a vase from the factory of Brygos.² Two youths face one another in conversation. They wear dotted himatia, one with a black border, and fillets. The flat form of the skull, the narrow eye with the small black dot and the fine nose with the line at the edge of the nostril—all mark the heads as typical of Brygos. The lips are edged by fine black relief lines and the chin is not very prominent. The fragment is an excellent bit of work especially in the brilliant black glazed varnish. At the right the letter K, at the left, Ζ. For another fragment by Brygos, see Miscellaneous Fragments, No. 25.

17. Fragment of a red figured cylix showing a maenad moving to the right on the exterior. The fragment belongs to a vase from the factory of Hieron³ and came from Rome, T L 18a 19. The head of the figure is one typical of Hieron and closely resembles the heads of maenads on a cylix in Munich. Similar are the strands of flying hair, the fillet, the skin borne over the left arm, the chiton with three engrailed folds about the neck and the necklace. She bears a thyrsus in her left hand. The work on the fragment is most exquisite. The relief lines show unusually fine execution.

18. Fragment of a red figured hydria. Design, a woman at a fountain. Behind a woman who faces right and who appears to be bending over as if to procure water, stands a Doric column. The garment worn is of a thin material, the texture being indicated

¹ *Mon.* XI, pl. 33.

² Cf. Furtwängler-Reichhold, pls. 50, 25.

³ *Wiener Vorlegebl.* A, pl. II; Furtwängler-Reichhold, pl. 46. The *painter* is again Makron in Beazley's opinion.

by wavy lines in a dilute wash. The hair is covered with a hood except the end which is free.¹ The hair about the face is rendered in a dilute wash. Fine style.

19. Fragment from a cylix with offset lip. Design, a horse moving to left; in the background, a tree.

20, 21. Fragments of a red figured cylix from the hand of Onesimos. The interior shows a dog seated on the ground in front view. The exterior has representations of horses and riders. The boots worn by the riders and the mantles are similar in design to those represented on the vases of Onesimos.² An additional fragment showing the head of a horse is entirely in the manner of Onesimos.

22, 23, 24. Fragments of a cylix with figures engaged in the palaestra. The fragment is noted as rare and comes from Dr. Hartwig's collection, 43^a–43^c, from Cervetri. Two youthful male figures stand on either side of a seated figure. The youth at the right has a strigil in either hand. All three wear diadems plastic in character. On the interior of the cylix a design of red ivy leaves with white berries and branches passes around the vase. For a vase from the same hand, compare a cup from Ruvo.³ The interior design represents a satyr and maenad. Around the designs similar meander patterns and decorative patterns of ivy and berries. Fine style.

25. Fragment of a red figured vase showing the head and shoulders of a youth, perhaps drunken. The head is thrown backward, the mouth open. Style of Brygosmaler (?).⁴

26. Fragment of an unfinished vase showing the leg of a man. The work shows broad strokes of the brush without relief lines.⁵

27. Other Miscellaneous Fragments given in catalogue form in an attempt to be as complete as possible. Of these *b*, *c*, *k*, and *o* are the most important.

a. Fragment from the interior of a cylix. Helmeted warrior. Pamphaeus (?). Careless work.

¹ *Mon.* VIII, 35.

² Hartwig, *Meistershalen*, pl. LIII.

³ A. de Ridder, *Catalogue de vases peints de la Bibliothèque Nationale*, 824; pl. XXIII. Mr. Beazley informs me that there is a fragment in Petrograd by the same hand, published in the *Comptes Rendus*, and that the fragments of a large white crater in New York recently published by Hauser (in Furtwängler-Reichhold-Hauser) are very close.

⁴ Cf. Buschor, *Gr. Vasenmalerei*, p. 166, fig. 118 (Maenad, Munich amphora by Kleophrades).

⁵ Cf. *Jb. Arch.* I. 1899, p. 165.

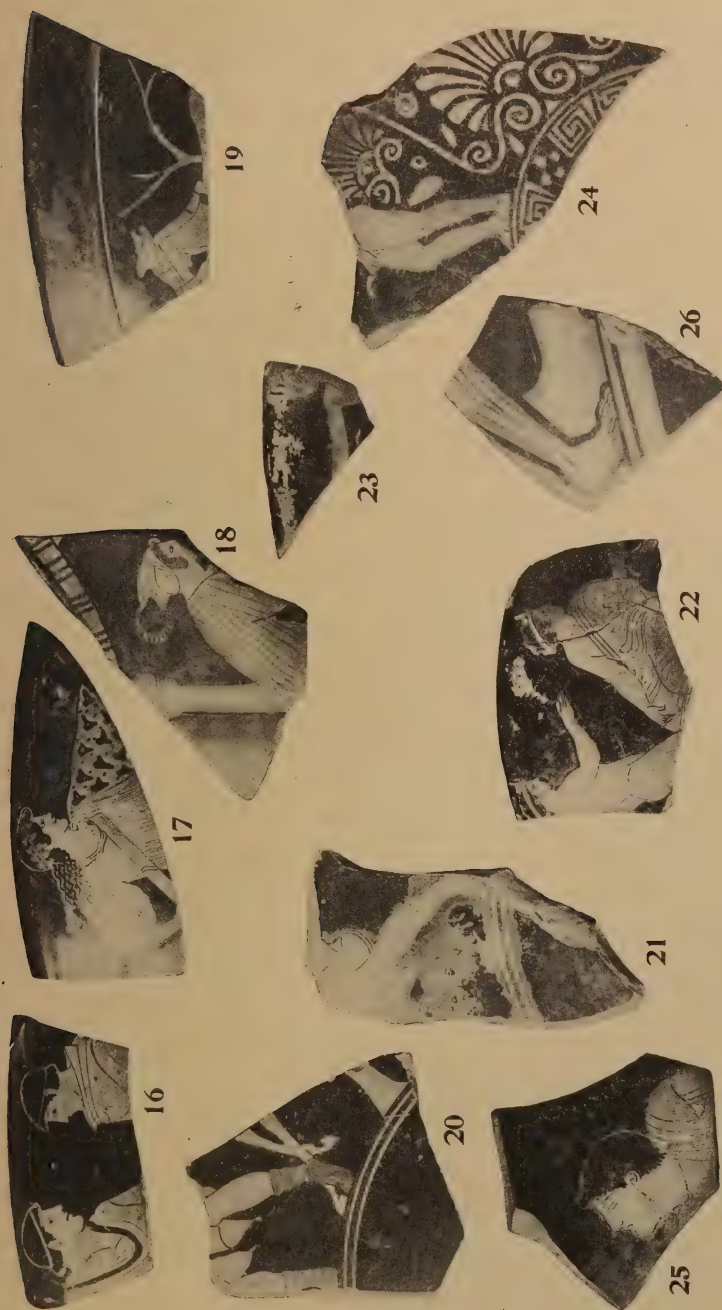


FIGURE 21.—FRAGMENTS OF RED FIGURED VASES

b. Fragment of a small cylix. Interior, head and shoulders of a sphinx. Beside the face, the letter E in purple paint. The vase belongs to a master of the Epictetan cycle,—possibly to the Epilykos class of vases because of its miniature character and careful work. The drawing, however, is not entirely similar to the drawing of the sphinx on the cylix in Mr. Warren's possession.¹

c. Small fragment showing the head of a woman with the hair bound around the head with a purple fillet and the ends left free. Behind her is a winged figure. The hair that is left free is done in long straight relief lines of a very fine character. Style of Cachrylion (?).

d. Red figured cylix, interior. Nude warrior, moving left, looking backward, shield in left, spear in right.

e. Red figured cylix, interior. Youth, nude to waist, seated on a stool. Meander pattern.

f. Red figured cylix, interior. Youth, nude to waist, reclining on couch, striped cushion at back, cylix in left hand, Meander. Hieron (?).

g. Red figured cylix, interior. Youth wrapped in mantle standing beside a reclining figure.

h. Red figured cylix. Satyr (?) pursuing maenads (?). Only the leg and staff of the satyr and the lower part of the female figures are preserved. Meander pattern.

i. Handle and small piece of the bowl of a red figured cylix. Design, a barbarian bearded and wearing a long-sleeved, dotted garment and cloak.

j. Fragment of a red figured cylix from Brygos' factory. Exterior, Heracles pursuing a woman (?). He wears a lion skin over a short chiton. The upper part of the figure is lost, as is also that of the woman. She wears an Ionic chiton with a striped and dotted himation. The drapery is treated in the same manner as that of Polyxena on the Iliupersis cylix in the Louvre;² cf. the foot of the fleeing woman with that of Andromache on the same cylix. The technique of the two cylices is the same. The meander pattern surrounding the design is also similar, three meanders alternating with red cross squares.

k. Fragment of a large amphora. Woman seated on a horse. Below, meander and saltire square.

¹ *Mon. Piot*, XX, 1912, pl. VIII. Beazley suggests Euthymides.

² Furtwängler-Reichhold, pl. 25.

l. Fragment of an amphora. Woman in Ionic chiton with overfold, pursued. Fine style.

m. Fragment of a large amphora. Leg and part of cloak of a rider on horse.

n. Head and breast of a satyr. Fine style.

o. Head of warrior (?) interior of cylix. He carries two spears. The hair is done in a dilute wash. Style of Meidias. Meander and checkerboard square pattern around design.

p. Numerous smaller fragments.

XXIII. South Italian oenochoe with trefoil lip. Design, head of a satyr. Below the panel, wave design. Rosettes and various stop-gap ornaments in white are employed.

XXIV. Fragments of a large South Italian vase from Rome. R 1090. Design, Lycurgus with an axe killing his children, one of whom he is holding over his shoulder by the legs.

Part of a South Italian vase. Design, Eros seated holding a casket. (Naples.)

XXV. Fragment of an Arretine mould signed by Marcus Perennius, TL 8-III. Erotic Group, much effaced.

XXVI. Megarian Bowl bought in Rome, from Lower Etruria.

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ADDENDA ON LARYMNA AND CYRTONE

THE following are brief notes upon some new material which came to hand only after the second article on Locrian topography had gone to press.—M. L. Cayeux, *Revue Scientifique*, May 9, 1914, p. 585, adduces the “quais” at Larymna as evidence that the sea level in Greece has not changed materially from antiquity to the present. While there is a superficial resemblance to quays in the walls at Larymna owing to the fact that the débris behind them has been levelled up for the most part to the top of the still standing courses, the extent of the construction, the existence of several towers, and the continuity with what are undoubtedly fortifications, especially the polygonal section beside the inner harbor, make it quite certain that we have here nothing but city walls.—Ph. Négris, *Roches cristallophylliens et tectonique de la Grèce*, Athens 1915, pp. 105 ff., expresses the expert opinion that the stone used in the walls is identical with that of the strata in the immediate vicinity, from which one might conclude that the similar material employed at Halae was transported thither from the quarries at Larymna, no doubt by sea. In that case it would appear that the fortification of these two sites was the outcome of a general concerted policy, and my suggestion that this was due to the naval policy of Epaminondas would be thereby supported. Regarding the comparatively insignificant depth of erosion (15 to 20 cm.) on the lower courses of the wall, which are now lapped by the water, M. Négris believes that, had the sea always been at this level, such soft stone would have been much more deeply eroded. While this is no doubt true, and in so far substantiates my view about the change of level, it must be remembered that the falling outward of the upper courses, many blocks of which can still be seen in the water, has doubtless greatly retarded the erosion of the standing wall. M. Négris has also discovered an ancient, now submerged, quarry on the opposite side of the bay, about 200 m. southwest of the landing

place of the mining company. Ten drums of columns, measuring 1.65 to 1.70 m. and 0.60 m. in thickness, with knobs for transportation, can be seen. This establishes the fact of an appreciable local subsidence, but in view of the severe seismic disturbances to which this region is subject, can hardly be used as direct evidence for a similar change of level on the opposite side of the bay, as indeed M. Négris himself admits.—Regarding the etymology of Larymna, I observe that Fick, *Bezz. Beitr.* XXI, p. 277, accepts the one given by Hesychius (see above, p. 60).

Mr. A. W. Gomme, in an admirable essay entitled 'The Topography of Boeotia and the Theories of M. Bérard,' *Annual of the British School at Athens*, XVIII, 1911–1912, touches upon several interesting points which concern my inquiries. Following M. Bérard's well known principles of ancient sailing, Mr. Gomme (p. 98) notes that the protected harbor of Larymna with its copious water supply must have frequently attracted passing merchant vessels, a circumstance which, added to its admirable location as the natural outlet of the Copaic basin, would surely have made it a considerable port so long as that basin was in a flourishing condition. He also calls attention to the fact that a good part of the route from Anthedon to Orchomenus is "steep and rocky" (p. 200), but that to Thebes is "not difficult," so that Anthedon appears as the more natural outlet of the latter, whereas "the route from Larymna to Orchomenus is easy (when the Copais is drained), to Thebes circuitous and difficult," with the result that Larymna appears to be the natural outlet of the former. [I should, however, hardly call the Kephalaria valley above Larymna "rough," as such hill valleys go in Greece, and I doubt if the trip from Larymna to Karditza be "a full day's journey ἀνδρὶ εἰς ὥνῳ." I walked the distance myself between 2.30 and 9.15 p.m. by a smoother, but more circuitous route, and spent about two hours of that time in an examination of Gla and the Megale Katavothra.] The observation that there never could have been any important settlements on the Skropeneri bay (p. 195), owing to the general character of the district, serves to confirm my arguments against Leake's view that Lower Larymna was located there (*A.J.A.* XX, pp. 34 ff.). The line from Orchomenus to the Bay of Opus by way of Abae and Hyampolis could never have been a main connection with the sea for the Copaic basin, because it led through an outlying portion of Phocis and the very heart of Opuntian Locris, districts over which

there is no evidence that the Minyans exercised control, and was an appreciably longer route than that to Larymna, even for Orchomenus itself which lay at the head of this line, and very much longer for the rest of the Copaic basin which naturally looked for its outlet down the course of the dikes and rivers to the sea. The two short trails over the mountains, described on pp. 201 f., are of course quite out of the question as arteries of trade. The route to the Gulf of Corinth cannot have been much employed, partly because of its difficulty (pp. 203 f., 205, note), but mainly because in the days of the Minyans there could have been little commerce with the West as compared with the East. All these considerations tend to support my contention that Larymna was the main harbor of Orchomenus. That is not to claim with M. Bérard that Minyan wealth was wholly, or even in the main, due to commerce (certainly Mr. Gomme has shown that his "law of the isthmus" is absurdly applied to Boeotia), but merely to point out that whatever commerce the Minyans did possess must have passed almost exclusively by way of Larymna. Possibly Mr. Gomme, in a justifiable but perhaps excessive reaction against the fantasies of M. Bérard, has exaggerated somewhat the difficulties of communication and the consequent scantiness of commerce; for the Minyans and the Cadmeans were in such close contact with the Minoan world that the whole external aspect of their civilization was determined thereby, and a considerable development of commerce would seem to be an inevitable concomitant of affluence and unity of culture; moreover, we should not forget that Orchomenus was a member of the Calaurian amphictiony until the historical period. Mr. Gomme asserts further that "it (the influence of Orchomenus) does not exist either in Halae or Larymna" (p. 209). Since, however, neither place is mentioned more than two or three times outside of the geographers, this would seem to be overemphasizing the *argumentum ex silentio*. As for Halae, indeed, I see no reason to suppose that it ever had important Minyan connections; certainly it is anything but the natural outlet for the Copaic basin. But for Larymna the case is different. It is the closest, most easily accessible, and best harbor, and cannot fail to have been utilized if there was any contact with the sea at all. Besides, there is the archaeological evidence in the shape of the old polygonal walls near Opus (*A.J.A.* XX, pp. 45 f.) and at Larymna itself, and the deep ruts near upper Larymna. And in speaking once

more of the ruts, I am reminded that in the article on Larymna above, I neglected to report that on the way over the saddle between the Copaic lake and the upper valley of Larymna I had observed "traces of ancient wheel ruts," as I jotted down in my note book at the time. These clearly belong to the same road which is so easily traced at Upper Larymna.

I note further that Mr. Gomme adds his authority (p. 201, note) to the list of those who, for quite sufficient reasons, deny that Pausanias ever made the trip from Acraephium (or better Acraephia) to Copae by the route which he describes (cf. *A.J.A.* XX, p. 33, 6); also that his excellent map, pl. IX, locates Hyettus correctly; finally that Mr. Gomme gives a good description of the trail which leads from Lutsi directly across the mountain by way of Dragana to the valley of the Platanus, so that the statement of Pausanias about what one would find on the other side if he crossed the mountain from Cyrtone, is correct enough in implying that there actually was such a road. I was aware of the existence of this route, and have in fact a photograph of its lower course on the Locrian side, but neglected to mention it specifically in the discussion above (*A.J.A.* XX, pp. 163 ff.). That this trail does not lead directly through Cyrtone (Kolaka), is hardly more than a slight inaccuracy of statement, for it does debouch into the general district where Olmones, Hyettus, and Cyrtone are located, crossing the summit almost midway between Hyettus and Cyrtone, the two nearest ancient towns.

I ought also to note that Fick, *Bezz. Beitr.* XXII, pp. 49 f., although he is inclined to regard Φοῖνιξ and Ἑλατα as possible names for springs (cf. above, p. 171), is unable to cite any parallels for the usage.

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A MARBLE HEAD FROM CORINTH

[PLATES XIV-XV]

THE small female head here discussed was unearthed during the course of the excavations at Corinth in 1914. It was found embedded in dry earth which had come up originally as mud from the great drain running north from Peirene, and hence the circumstances of its discovery throw no light upon the period of the work itself.¹

The head is very small ²—0.14 m. from crown to break at base of neck, maximum width 0.085 m. The material is a fine-grained Pentelic marble, the crystals small, and the texture smooth and homogeneous. The work represents a girl of eighteen or thereabouts with a face of pure Greek type. The head is turned slightly to the right, and the gaze is directed downward toward a point not far distant. The hair, which is bound over the forward part of the crown by two nearly parallel fillets, is parted at the middle of the forehead and brought down in broad, simple waves across the brow (PLATE XIV). The waves extend back, however, only as far as the line of the front fillet, and behind this the hair is drawn back irregularly, as though to be gathered into a loose knot at the back of the head (PLATE XV). On each side of the face, where the hair, passing low across the temple, swells out over the ear, there rests upon the cheek a broad spiral curl.

The head itself is well preserved except for the rear portion, where a close examination of the break (PLATE XV) shows that the fragment did not belong originally to a statue in the round,

¹ I wish to acknowledge my indebtedness to Mr. B. H. Hill for valuable criticism and suggestions, and to Mr. L. D. Caskey for the many courtesies extended to me at the Boston Museum of Fine Arts.

² Complete dimensions: length of face (from parting of hair to bottom of chin) 0.074 m.; width of face 0.06 m.; height of forehead 0.02 m.; length of nose 0.025 m.; from nose to bottom of chin 0.029 m.; greatest width of the broken surface at back of head 0.075 m.



MARBLE HEAD FROM CORINTH



MARBLE HEAD FROM CORINTH

but is clearly from a work in high relief¹; the break at the rear is about in the plane of the original background surface. In addition to this break the tip of the nose is slightly battered, and a chip is missing from the hair just above the left temple.

In the matter of technique two points are worthy of attention. First, the drill, the free use of which is in itself an indication of comparative lateness,² is seen to have been employed extensively. Drill marks are apparent at the inner corners of the eyes, inside the nostrils, at the corners of the mouth, and in the middle of the upper lip; the opening of the left ear was also done with a drill of larger size. Furthermore, in the treatment of the eyes, the eye-balls, instead of being rounded regularly outward as in nature, are slightly flattened, with just a trace of working—a faint mark of incision—to indicate the outline of the iris (PLATE XIV).

In Roman portrait sculpture the practice of indicating iris and pupil by incision did not originate until after the close of the Flavian epoch. In none of the portraits of that or the earlier periods does this treatment of the eye appear.³ Later, however, in the time of Trajan and Hadrian, the custom of indicating iris and pupil by incision begins, and in its application a regular course of development can be traced: the cutting tends steadily to become deeper and more pronounced. At first the incision is very

¹ The height of the relief, as closely as can be determined from extant indications, was at least 0.085 m.

² *I.e.*, the *undisguised use* of the drill, little care being taken to conceal the traces even on flesh surfaces. But cf. Gardner's *Handbook of Greek Sculpture*, p. 22,—“the drill, according to Paus. I, 26, 7, was first used by Callimachus, who invented it in the latter part of the 5th. cent. B.C. But drill marks are to be found in the Aegina marbles (Brunn, *Geschichte d. gr. Künstler* I, 253).”—It should be noted, however, that the drill marks which appear on the Aegina marbles are of a very special sort, and have no real bearing on the technique of the sculptures themselves; in these marbles the *process* of sculpture owes nothing to the drill, *i.e.*, to carving or undercutting by means of the drill. When the drill is used at all, it is only for boring holes by which to attach external bronze accessories or ornaments such as girdles, collars, diadems, locks of hair, etc. The holes are large and fairly deep, perpendicular to the surface of the marble, generally uniform in size, and quite undisguised (inasmuch as the attached ornaments would effectually conceal them when in place). See Brunn-Bruckmann, *Denk. gr. und röm. Sculp.*, Nos. 23, 24, 25, 27, and 121.

³ Cf. Vatican, Sala dei Busti, No. 371 (Amelung, *Vat. Kat.*, II, pl. 69 left, lower left hand corner); also *ibid.*, No. 354 (Amelung, II, pl. 70, left, upper left hand corner); Cortile di Belvedere, No. 58 (Amelung, II, pl. 16); Museo Chiaramonti, No. 33 (Amelung, I, pl. 35 bottom, second from right).

light, the eyeball is flattened, and the eye is worked in a rather impressionistic manner.¹

It may be urged at this point that we are now speaking of portrait heads, whereas the particular work under discussion is manifestly not a portrait. This is true, but certain evidence indicates that, although the incision of the eyeball was at first confined to portraiture, it was soon extended to sculpture in general. It was certainly thoroughly established not later than the first part of the Antonine period.

From a merely cursory examination of the female portrait busts of the imperial period it is evident that certain distinct modes of hairdressing were in vogue during definite periods. Viewing these busts and the portraits which appear on coins of the Empire,² we see that the coiffure generally worn by Faustina the Younger³ resembles with striking exactitude that which appears on the head from Corinth. We have the same flat waving of the hair across the brow and temples, the same straight parting over the centre of the forehead, the waves at the side of the face are in both cases brought so low as to obscure the upper half of the ear, and—most striking of all—in a large number of the portraits of Faustina there appears just in front of the ear a small loop or curl projecting downward from below the edge of the wave which passes over the upper part of the ear.⁴ At the back of the head the hair is regularly gathered into a round medium-sized knot.

As an example of the characteristic "Faustina coiffure" appearing on works other than portraits of the two Faustinas, we might mention the bust of a woman, No. 77 in the Museo Chiaramonti.⁵ This belongs to the general type of Faustina the Elder, and in the treatment of the hair about the forehead and face shows a striking similarity to the Corinthian head. From a central parting the hair is brought down across the brow in

¹ Cf. Vatican, Sala dei Busti, No. 283 (Amelung, II, pl. 64, lower shelf, right, a bust of Hadrian); also *ibid.*, No. 357 (Amelung, II, pl. 70, left, lower right hand corner, a bust of Antinous); Galeria delle Statue, No. 271, a portrait called Poseidippos (Hekler, *Gk. and Rom. Portraits*, pl. 110a, and 111a; also Amelung, II, pl. 54, right, "Copie in der ersten Kaiserzeit").

² See 'Hairdressing of Roman Ladies as Illustrated on Coins,' by M. M. Evans in *Num. Chron.* 1906, pp. 37 ff.

³ Cf. Bernoulli, *Röm. Ikon.*, II, 2, pls. LIII, LIV, Münztaf. IV, No. 19 (cf. also Nos. 8, 9, and 10, Faustina the Elder).

⁴ Cf. *Num. Chron.* 1906, pl. IV., Nos. 38, 39, and 42.

⁵ Amelung, I, pl. 38, upper shelf, fourth from right; text, I, p. 361.

broad flat waves, the number and arrangement of which from centre to ear are the same in both cases. We notice also that the little curl appears in front of the ear, and, as in the Corinthian head, the upper part of the ear itself is hidden by the wave which passes over it. Save for rather harder, more realistic treatment and less artistic work, the "front hair" might be that of the head from Corinth.

The significance of the resemblance between these modes of hairdressing will perhaps be better appreciated when it is stated that, up to the time of Faustina the Elder, there is no instance in sculpture of a female coiffure in which we see the small curl in front of the ear combined with the broad flat waving of the hair across the forehead, temple, and side of the head.¹ This particular mode seems to be distinct and characteristic of its period, and its vogue was confined rather closely to the first three quarters of the second century A.D. But here again it might be objected that we are speaking of portraits, whereas the Corinthian head is not a portrait. However, there is ground for believing that the type of coiffure affected by the Faustinas had a distinct influence on contemporary sculpture. In Room XIV of the Lateran Museum is exhibited an ideal head²—of Demeter, perhaps, for it is crowned with a chaplet of wheat ears. In this work the arrangement of the hair over the forehead is practically identical with that of the Corinthian head, and the spiral curl also appears in front of the ear. On grounds of style, and from the indications of drill work, the head may be assigned to the Antonine period: it even seems that the eyeballs are very slightly worked, as in the head from Corinth. Other examples might be mentioned showing the influence of "the Faustina mode" on the general sculpture of the day, but the foregoing is sufficient to illustrate the point in question.

¹ Apparent exceptions: The well known "Sappho type" (see Baumgarten, Poland and Wagner, *Die Hellenische Kultur*, p. 187, fig. 158). Here, although we have a small single or double curl in front of the ear, it is treated in a quite different manner, and the hair across the brow is closely bound down by a complicated arrangement of fillets.—The "Berenice" of the Naples Museum (see Anton Hekler, *Gk. and Rom. Portraits*, pl. 65b). In this, the resemblance to the Corinthian head is more apparent than real. The hair is waved and rolled back from the brow naturally and irregularly, no formal or definite arrangement being followed. The small lock which appears on the cheek in front of the ear is neither curled nor looped; it is simply a stray wisp which is allowed to escape and rest naturally against the curve of the cheek.

² Seemingly unpublished.

As to the prototype of the Corinthian head—the earlier Greek type upon which it was modelled—there can be little doubt that this was archaic. The style of the head is so clearly archaistic, it harks back so evidently to the spirit of the early fifth century, that a model must be sought for it from among the works of that early period. Its prototype would seem to have been some such work as that exhibited in the Borghese Museum, a female statue, No. CCXVI in the Egyptian Room.¹ Here, although we note the central parting and the flat waving of the hair across the forehead, the essential difference in treatment is at once apparent; in the one we see true archaic formalism combined with simple minuteness of detail, in the other a studied simplicity which is indicative of a much later age. And this is still further carried out by the use of the double fillet; the front fillet of the Corinthian head occupies very nearly the same relative position as does the broad single band which passes about the head of the Borghese statue. There is a marked resemblance in minor details as well; the shape of the forehead and the general contour of the face is much the same, while the profile of the forehead, nose, lips, and mouth is very similar. At the side of the cheek, just in front of the ear, the hair is slightly looped and carried back and over the ear.

From the examples just quoted, and from the points of technique considered above, we may conclude that the head from Corinth is an archaistic work of the Antonine period. It is apparent that its author was seeking to obtain an archaic effect without indulging in any absolute archaisms. The long, parallel, graved lines running down the waves of hair across the forehead add a touch of formalism which is strikingly archaic,² and this impression is much heightened by the use of the double fillet.³ It seems probable that the sculptor of the Corinthian

¹ Helbig, *Führer* (edit. 1912-13), No. 1558; Brunn-Bruckmann, *Denkmäler*, Nos. 261, 262: Helbig says "Der Kopf ist antik aber stark abgeputzt und nicht zugehörig. . . . Der ebenfalls archaische Typus des. . . . Kopfes, der leider durch rücksichtsloses Putzen des Ergänzers und vor allem durch die Verkleinerung der Nase, entstellt worden ist, erinnert an den Kopf der von Euthydikos geweihten Kore auf der athenischen Akropolis." For the Acropolis "kore" see Gardner's *Handbook of Gk. Sculp.*, p. 188; also S. Reinach, *Têtes Antiques*, pl. 13, p. 11.

² Cf. the Acropolis "kore," Gardner, *loc. cit.*

³ The double fillet appears early in Greek sculpture and was much used during the classic period. It appears practically always on the copies and later types derived from the Cnidian Aphrodite,—on the Niobids, the Berenice of the Naples Museum, etc.

head took as his model a work of about the same type as the head of the Borghese statue. The resemblance in effect between the two can hardly be otherwise explained.

As regards the composition to which the Corinthian head once belonged, the position of the eyes indicates that it must have formed part of a group. Judging from the repose of the face, its strength, and the lack of any trace of passion, we might hazard the guess that the subject represented was an Artemis,—but this is mere conjecture.

Although we find we have been dealing with a work belonging to a period of sculpture ordinarily looked upon as hopelessly degenerate, it may be remarked in closing that in this head from Corinth we have proof that the Greek spirit had not yet entirely passed away. The work is truly Greek, though but an echo of the greater period that had gone before.

E. H. SWIFT.

PRINCETON, N. J.

ARCHAEOLOGICAL NEWS¹

NOTES ON RECENT EXCAVATIONS AND DISCOVERIES; OTHER NEWS

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GENERAL AND MISCELLANEOUS

DARDANELLES.—Antiquities from Gallipoli.—In *C. R. Acad. Insc.* 1915, pp. 282-285 (fig.), E. POTTIER reports that in the summer of 1915 the French expeditionary force at the Dardanelles, while digging trenches on Gallipoli peninsula, opened a number of ancient tombs. Several small vases and a few statuettes similar to those found at Myrina were discovered. The tombs evidently dated between the third and the first centuries B.C.

NECROLOGY.—Charles Avezou.—Charles Avezou, a former member of the French School at Athens, was killed at Kosturino in the campaign of the Vardar in Serbia. He had taken part in the excavations on the islands of Delos and Thasos, and had explored the south coast of Thrace and Gallipoli. (*R. CAGNAT, C. R. Acad. Insc.* 1915, p. 519; *S. R., R. Arch.* III, 1916, p. 151.)

Pablo Bosch.—A connoisseur of Spanish coins and medals and an expert collector of early Flemish paintings, Pablo Bosch, died at Madrid, October 19, 1915. (*S. R., R. Arch.* III, 1916, p. 153.)

Michel Bréal.—In *R. Arch.* fifth series, III, 1916, pp. 139-150 (portrait), S. REINACH contributes an appreciative obituary notice of the distinguished philologist and grammarian Michel Bréal (1832-1915).

Désiré Charnay.—One of the most distinguished Americanists of France, Désiré Charnay, died in October, 1915, aged 87 years. (*S. R., R. Arch.* II, 1915, p. 376.)

Martin L. D'Ooge.—In September, 1915, Martin L. D'Ooge, Professor of Greek emeritus of the University of Michigan, died. He was born in Holland in 1839 and studied at the University of Leipzig. He was a philologist rather than archaeologist, editing Demosthenes *On the Crown* (1875) and the *Antigone* of Sophocles (1884), but he was always interested in archaeological work. During the year 1886-7 he was Director of the American School of Classical Studies at Athens and he was a member of its Managing Committee at the

¹The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Dr. L. D. CASKEY, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor ARTHUR L. WHEELER, and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1916.

For an explanation of the abbreviations, see pp. 123-124.

time of his death. In 1908 he published his most important work, a study of the Acropolis at Athens. His genial personality will be long remembered.

Evan Gorga.—In June, 1916, Evan Gorga, a well-known opera singer, died in Rome. He possessed the largest collection of ancient glass in Italy, as well as an extensive collection of Etruscan antiquities.

Wolfgang Helbig.—Early in October, 1915, the death of Wolfgang Helbig took place. He was born at Dresden in 1839. He studied at Göttingen and Bonn (Ph.D. 1861) and went to Rome in 1862, where he succeeded Brunn as Second Secretary of the Institute in 1865. He, with Henzen, retired from office in the Institute in 1887. Helbig's works are many and important. Among them are: *Wandgemälde der vom Vesuv verschütteten Städte* (1869), *Untersuchungen über die campanische Wandmalerei* (1873), *Die Italiker in der Po-Ebene* (1879), *Das homerische Epos aus den Denkmälern erläutert* (1884 and 1887), *La collection Barracco* (1892-1894), the *Guide (Führer)* to the collections of antiquities in Rome (1891, 1895, 1912).

Gaston Maspero.—On June 30, 1916, Gaston Camille Charles Maspero, the eminent Egyptologist, died suddenly in Paris, while attending a meeting of the Académie des Inscriptions et Belles Lettres, of which he was secretary. He was born in Paris June 24, 1846, and in 1874 succeeded De Rougé as Professor of Egyptian Archaeology and Philology in the Collège de France. In 1881 he became keeper of the Bulak museum and director general of antiquities in Egypt, but resigned this position in 1886 and later resumed his position in the Collège de France. He received from Oxford University the degree of D.C.L. Among his many works are: *The Dawn of Civilization*, *Egyptian Archaeology*, *Histoire ancienne des peuples de l'Orient*, *Les contes populaires de l'Égypte ancienne*, *Les Mastabas de l'ancien Empire*, *Guide du visiteur au musée de Boulaq*. (*Boston Evening Transcript*, July 1, 1916; *Nation*, July 6, 1916, p. 18.)

Robert André Michel.—Robert André Michel, a former member of the French School in Rome, was killed in battle at Crouy in October, 1915. He was interested especially in mediaeval art, and left in manuscript a work on the palace of the Popes at Avignon and other castles of the fourteenth century. (*R. CAGNAT, C. R. Acad. Insc.* 1915, p. 518.)

Angiolo Pasqui.—Professor Angiolo Pasqui died at Rome October 15, 1915. He was born at Arezzo in 1857. In 1895 he became Assistant Inspector of antiquities, and in 1897 Inspector. From 1908 he was Director of the excavations at Rome, and in his official position uncovered many important sites including Boscoreale and Horace's villa near Licenza, as well as the Ara Pacis Augustae. He published many articles, especially accounts of excavations, in the *Notizie degli Scavi*. (*Cronaca delle Belle Arti*, II, 1915, pp. 77-79.)

Paul Pierret.—Paul Pierret, for many years Professor of Egyptian Archaeology in the École du Louvre, was born in 1836 and died January 10, 1915. Among his works are a *Dictionnaire d'archéologie égyptienne* (1875), a *Panthéon égyptien* (1881), and a translation of the *Book of the Dead* (1882). (*S. R., R. Arch.* III, 1916, p. 154.)

Casimir Gaston Vasseur.—Casimir Gaston Vasseur, Professor of Geology at Marseilles, died October 9, 1915, aged 60 years. He was a careful student of local archaeology. His book *L'origine de Marseille* (1914) contains the results of his excavations and researches. (*S. R., R. Arch.* II, 1915, p. 376.)

EGYPT

MEDINET HABU.—Excavations in 1913.—In *B. Metr. Mus.* XI, 1916, pp. 102–108 (10 figs.), H. BURTON describes the excavations of Theodore M.



FIGURE 1.—MEDINET HABU; STONE DAIS

Davis in 1913 on the site of the palace of Ramses III, on the south side of the temple of Medinet Habu. Among the interesting discoveries was a bathroom 5 ft. 7 in. by 4 ft. The bath consists of a stone slab hollowed out in the middle to a depth of four inches and to a length and breadth of 3 ft. 6 in. and 3 ft. 4 in. respectively. At one end is a hole for the water to run through into a trough from which it passed into a stone receptacle. To the east of this room was found a small limestone base for a throne, with two steps leading up to it; and fifteen feet to the north a throne dais of limestone (Fig. 1) measuring 6 ft. 7 in. by 5 ft. 3 in. with three flights of steps, one in front of four steps and one on either side of three steps. On either side of the front steps is the lower part of a sandstone column upon a base



FIGURE 2.—MEDINET HABU; WINDOW

of black basalt, upon which are carved the king's names. Behind were two square pillars with portraits of the king. Further north were several pieces of sandstone which proved to be parts of three windows. One of these (Fig. 2) is now in New York and the others in Cairo. Further north a larger bathroom was found, and to the west of this a third bathroom. North of the principal bath a throne base smaller than either of the others was uncovered and immediately behind it a fourth bathroom.

THEBES.—The Rear Corridors of the Tomb of King Siphtah.—In *B. Metr. Mus.* XI, 1916, pp. 13–18 (7 figs.), H. BURTON describes the excavation of the rear corridors of the tomb of King Siphtah by Theodore M. Davis, in 1912–13. The tomb was discovered in 1905 and partly excavated, but abandoned owing to the unsafe condition of the rock. Mr. Davis found the sepulchral chamber which measured 9.30 m. by 13.50 m. The roof of the front part was supported by four columns, while the ceiling of the rest was vaulted. The sarcophagus of the king, of red granite, was found in the chamber. Its surface is completely covered with religious formulae and with figures of Isis and Nephthys. On the lid is an Osiride figure of the king. Many alabaster Ushabti figures of Siphtah were discovered, as well as large limestone jar-lids with conventionalized lotus designs upon them. Ten of the figures and three of the jar-lids are in the Metropolitan Museum. *Ibid.* p. 18 (2 figs.), H. E. W. describes the Ushabti figures. They vary from 20.5 cm. to 29.4 cm. in height and represent the king as a mummy with crossed arms. The eyes, mouths, and inscriptions are drawn in black ink. The hieroglyphs record a version of Chapter VI of the Book of the Dead.

ASIA MINOR

RHODES.—Excavations in 1913.—In *Boll. Arte*, X, 1916, pp. 87–94 (13 figs.), B. PACE reports upon the results of the Italian excavations on several sites in the vicinity of Ialysus in 1913. Mycenaean tombs were opened in different places, but the contents were of no particular interest. Remains of a rectangular building exist at Stavros, about one hundred metres southwest of the church, and there are preserved in the church various architectural fragments.

GREECE

ATHENS.—The Excavations at the Odeum of Pericles.—In *Πρακτικά* for 1914, pp. 81–124 (plan; 30 figs.), P. KASTRIOTES describes the excavations carried on for eight months in 1914 at the east end of the Acropolis in an effort to find the site of the Odeum of Pericles (see *A.J.A.* XIX, 1915, pp. 345 f.). Among the objects brought to light were many fragments of the Parthenon cast down by the explosion of 1687 and still bearing marks of fire, a piece of the terra-cotta conduit which led to the Enneacrounos, many small antiquities, and several pieces of sculpture. These include a beardless head of a youth, which may have represented an emperor; a battered head of a barbarian crowned with bay leaves, which may have been a portrait of Ariobarzanes, king of Cappadocia, who rebuilt the Odeum; parts of two marble masks; and two reliefs. One of these (0.20 m. high, 0.20 m. wide, and 0.65 m. thick) represents Asclepius (headless) standing, while a female figure kneels before

him. Kneeling suppliants are very rare in Greek sculpture. The other relief is the lower part of a double herm in the form of a stele, the first of its kind to be found at Athens. It has below at the right a *kerykeion*, and at the left a large *stamnos*. It may have served as a boundary between the precincts of Hermes and Dionysus. Some remains of marble seats, including one with an owl carved on it, probably belonged to the Odeum. The inscriptions found were of no great importance. In 'Αρχ. 'Εφ. 1915, pp. 145-155 (14 figs.), the same writer reports that he has found a scarping of the solid rock, apparently for the *cavea*, and a wall, probably separating the precinct of the Dionysiac theatre from that of the Odeum. Foundations of a stoa and cuttings in the rock indicate that the Odeum, as rebuilt by Ariobarzanes, was probably square in plan, with an internal arrangement similar to that of the Bouleuterion of Priene. A bone disc which served as a ticket to a revival of a play of Aeschylus in Roman imperial days was found. This bears on one side a picture of a building with a high central portion, perhaps the Odeum itself. Among the finds are published six short and fragmentary inscriptions. The excavations are to be continued.

Excavations at the Ceramicus.—A summary of work done and results obtained by the recent Greek and German (1914-1915) excavations in the expropriated ground between the Dipylon and Eleusis gates of ancient Athens and the modern Peiraeus Street (see *A.J.A.* XIX, 1915, pp. 91 f.) is given by A. BRUECKNER (*Arch. Anz.* 1915, cols. 111-124; plan; 8 figs.). The position of the Ceramicus, the broad street leading from the Dipylon to the Academy, has been determined within these limits by means of boundary stones of the fourth century B.C., and the ancient course of the Eridanus brook and of the Eleusis road beside it has been partially traced and will be more fully investigated when the contemplated removal of the church of Hagia Trias from the left to the right side of the brook has been accomplished. The ground on which the church will be rebuilt is found to be an ancient marsh without significant remains. The burial ground of the fifth and fourth centuries B.C. on the road south of the present site of the church and on the slope descending here from the city wall, has afforded a complete understanding of the burial customs of the best period of Athens, and something of the original appearance has been restored, making a sort of open-air museum of Attic funerary art. At the Ceramicus, although the greater part of the width of forty feet is still inaccessible, the history of its uses and appearance at successive epochs, from that of the "Dipylon" geometric burials to late Roman times, has been traced. Here was always the home of the baked clay industry in all its branches, from drain pipe and roof tiling to the finest painted vases and Arretine ware. Here are still intact the graves of those who were given public burial in recognition of their services to the state, some of the time of the Peloponnesian War, others of the fourth century. A notable strengthening of the defences of the city at the time of Philip and Demosthenes is seen at the end of the street next the Dipylon. After the destruction of everything outside the walls and the breach of the wall itself by Sulla in 86 B.C., a new street was cut through the débris in front of the gate and a new burial place was laid out here in which graves of the time of Hadrian and of the fourth century A.D. are found, as well as the original graves of the first century B.C. Those of the latest epoch, which are over the site of the earlier street, are apparently Christian. A

special Ceramicus museum for the housing of the pottery and other objects found here and the exhibition of the successive types of burial is contemplated. Among the single finds, a large character-mask in marble, of the New Attic Comedy (*ἡγεμῶν θεράπων*), is noteworthy. There are also a Hellenistic terra-cotta portrait relief, a life-size Parian marble head, doubtless from a portrait grave statue, of early Roman date, and a well-preserved Roman grave stele of a husband and wife.

Excavations at the Horologion of Andronicus.—In *Πρακτικά* for 1914, pp. 125–126, A. D. KERAMOPOULLOS reports that the excavations carried on in 1914 in the vicinity of the Horologion of Andronicus brought to light nothing of importance.

PELLA.—Excavations in 1914.—In *Πρακτικά* for 1914, pp. 127–148 (plan; 12 figs.), G. P. OIKONOMOS describes the work of the Greek Archaeological Society at Pella in 1914. A peculiar underground structure to which a flight of thirty steps led down was excavated, but its purpose is not yet clear. It may have been a tomb. North of this was a building, the walls of which are still standing to a height of 0.80 m. Three rooms placed side by side were cleared and a number of small antiquities brought to light. These include lamps of late Greek date, a few bronze coins dating from the time of Philip II and later, potsherds, a bronze ornament for a couch with the bust of Dionysus at one end and a donkey adorned with vines and grapes at the other, a bronze eagle which may have belonged to the same piece of furniture, vessels of bronze and terra-cotta, and part of what may have been a *κλῖβανος*. To the south was a large building of Hellenistic date of which five rooms were excavated.

PLATI.—Minoan Remains.—In *B.S.A.* XX, Session of 1913–1914, pp. 1–17 (7 pls.), R. M. DAWKINS describes the results of excavations carried on at Plati, on the edge of the plain of Lasithi, Crete, April 25 to May 25, 1914. Some pottery and some house walls of the first Minoan period were found, but most of the walls, as well as most of the pottery unearthed is of Late Minoan III. A small bee-hive tomb in the neighborhood contained some bones and a terra-cotta larnax, the form of which is an imitation of a wooden original. Both tomb and larnax are evidently very late in the period called Late Minoan III. Some house walls of Greek times were found, but there was evidently a complete break between the Late Minoan settlement and the Hellenic occupation of the site. The fact that the plain of Lasithi was apparently not occupied until toward the end of the Minoan I period is tentatively explained by the suggestion that the plain may have been a lake or a marsh, as it is now drained only by subterranean passages.

PREVEZA.—Ancient Tombs.—In *R. Ét. Gr.* XXVIII, 1915, p. 441, G. G(Lotz) calls attention to the contents of certain tombs of the sixth and fifth centuries B.C. recently opened at Preveza. There were many figurines of men and animals, and Protocorinthian and black-figured vases, including a cylix with a representation of the pursuit of the Centaurs by Heracles. A small sanctuary was discovered in the neighborhood.

SPARTA.—A New Mosaic.—There has recently been found at Sparta a fine mosaic covering an area of five metres. It is divided into three squares, one within the other. The first encloses a female marine divinity. The others have fantastic marine animals, hunting scenes, and a battle with Centaurs. (G. G(Lotz), *R. Ét. Gr.* XXVIII, 1915, p. 441.)

THESSALY AND MACEDONIA.—Explorations in 1913 and 1914.—In *Πρακτικά* for 1914, pp. 149–218, A. S. ARVANITOPOULLOS reports upon his discoveries at various sites in Thessaly and Macedonia while serving with the Greek army in 1913 and 1914. There was no opportunity for extensive excavation, although some digging was done. At **Elassona** there are remains of town walls. The site of the principal temple was located and inscriptions, vase fragments of different dates (including a Megarian bowl with a scene representing Odysseus leaving the cave of the Cyclops) and neolithic axes and sherds found. The Turkish custom-house has been converted into a museum in which the more important antiquities from the neighboring towns have been deposited. A brief catalogue of 133 numbers is given. At **Tsaritsane** there are remains of very early date as well as others extending down to the fourth century B.C. A pithos 1.57 m. high was found having upon the lip four large prehistoric characters, similar to Cretan characters. They had been engraved when the clay was soft. A second vase, now broken, is said to have had similar characters. Both are now in the museum at **Elassona**. At the site of the ancient **Chyretiae** several tholos tombs were found, and many inscriptions. A church on the citadel contains many ancient stones, probably from a temple of Asclepius. The sites of **Metropolis**, **Mylae** and **Mondaea** were determined; and efforts made to locate Malloia, Ericinium, Dodona and Cyphus, but although possible sites were found they were not positively identified. At **Azorus** the town walls are preserved in places to a height of four metres. A ruined church of St. Athanasius on the acropolis was built of stones from an ancient temple. There were neolithic settlements in the vicinity. Several Greek inscriptions were found here, as well as near the site of **Doliche**. Near **Gonnoi** there were discovered tombs and a temple which may be that of Asclepius. Near **Atrax** two temples were found, and the site of a neolithic settlement.

TIRYNS.—A Newly-Found Treasure.—A workman of the agricultural school founded at Tiryns by Capo d'Istria while digging about one hundred yards from the acropolis brought to light an important treasure. It had evidently been hidden in a chest. It consisted of several swords, many utensils, a beautiful tripod, several bowls and a large bronze vase. In the vase was an abundance of jewelry in gold, agate, ivory, amber and glass paste. There were bracelets, collars of gold, two gold diadems decorated with pieces of amber in the shape of crosses, and a large number of rings. On the bezel of one ring is a religious scene. A goddess or priestess in Mycenaean dress is seated before a columned altar. From the other side four figures in the guise of fantastic animals approach in solemn procession. Above are the sun, moon and stars. (G. G[LOTZ], *R. Ét. Gr.* XXVIII, 1915, pp. 440–441.)


ITALY

BOLOGNA.—Discoveries and Acquisitions, 1909–1915.—In *Cronaca delle Belle Arti*, III, 1916, pp. 38–42, G. GHIRARDINI records the archaeological discoveries in the vicinity of Bologna from 1909 to 1915. These were numerous, but not of great importance. Many antiquities of the Villanova period were found, also some interesting red-figured Attic vases, Roman grave stelae, mosaics, etc. At **Raola** an Etruscan tomb was discovered; at **Sarsina** a Roman

building with mosaics; another building with mosaics at **Brescello**; a hoard of republican coins at **Imola**; and at **Verona** discoveries were made in the interior of the Roman theatre. The writer also records the acquisitions of the Museo Civico at Bologna during the same period. A revised *Guide* to the collections was issued in 1914.

CORNETO TARQUINIA.—**Thefts from the Museum.**—There have been at Corneto Tarquinia two collections of antiquities, one in the Palazzo Vitelleschi and the other in the Museo Civico in the Palazzetto dell' Università Agraria. Last year it was decided to unite the collections and form a National Museum in the Palazzo Vitelleschi. On the night of April 4, 1916, when the collections were in the course of removal, thieves entered the Museo Civico and stole all the objects of gold, the scarabs, some of the coins and some small objects of bronze. (*Cronaca delle Belle Arti*, III, 1916, p. 47.)

ROME.—**Recent Discoveries.**—In *B. Com. Rom.* XLIII, 1915, pp. 52–70, LUIGI CANTARELLI gives a summary of recent archaeological discoveries in and near Rome, among which the following may be noted: 1. A part of the polygonal pavement of the ancient Via Salaria came to light 5 m. below the surface just outside of the ancient Porta Salaria. 2. Near the Monte Testaccio six unfinished column drums of “alabastro fiorito” were found; four of them had masons’ marks. They are part of the group described *ibid.* XLII, 1914, p. 207. Various other fragments were discovered at the same place. 3. In the Piazza Colonna on the site of the Palazzo Piombino were found the ruins of several small buildings, architectural fragments, parts of inscriptions, etc. Previous finds are recorded *ibid.* XLII, 1914, p. 209. The more important of the new discoveries are: Two brick stamps reading:

and

 P·IUVENTIVS·SATURNINU;
EX·FIGL·CUSINI·MESSALLI
GLAB·ET·TORQ·COS

A marble fragment with part of a grave inscription was also found here. 4. Just outside of the Porta Salaria additional inscriptions and fragments pertaining to the sepulcretum described *ibid.* XLII, 1914, p. 201 were unearthed. 5. To the right of the Porta Salaria within the walls 0.60 m. below the surface an inscribed travertine cippus was found.

Acquisitions of the National Museum.—In *Boll. Arte*, X, 1916, pp. 65–82 (19 figs.) R. PARIBENI records the more important acquisitions of the National Museum, Rome, from January 1, 1914, to December 31, 1915. In addition to the Aphrodite from Cyrene, the seated Christ and the decorated column from Montecitorio, there were the following sculptures in marble: (1) A fragmentary relief representing Victory restraining a bull; (2) a female head, probably from one of the Provinces of the Basilica of Neptune; (3) four fragments of a large marble vase with figures in relief representing a sacrifice to Athena on one side, and a sacrifice to another divinity on the other; (4) a small Attic grave stele of poor workmanship inscribed ΔΑΟC; (5) a portrait head of a Roman lady. The bronzes include, (6) a small female head; (7) a flying Cupid; (8) a winged Cupid standing on one foot and (9) an acrobat supporting himself on his hands. Among the terra-cottas were, (10) three figurines which may be Greek, dating from the fourth century B.C.; (11) an archaic Campanian antefix with the figure of a galloping horse-

man and a goose beneath the horse; (12) two copies of a so-called Campanian relief found along the Via Ostinense. The scene represents a winged Victory with a *vexillum* in her hands approaching a palm tree beneath which are arms and two very small figures of barbarians, a man and a woman. (13) Several Roman lamps were acquired from the Sambon collection. The inscriptions include, (14) a fragment of the Arval inscription; (15) a republican inscription from Bolsena; (16) a metrical grave inscription from Cesi; and (17) about two hundred other inscriptions chiefly sepulchral. (18) A fine glass-paste gem with portrait heads of Septimius Severus, Julia Domna, Caracalla, and Geta was acquired, as well as many coins. The latter include four hoards, one of twenty-six denarii and four asses of republican date from Terni; 883 imperial bronze coins found near Monte Testaccio, ranging in date from Augustus to Saloninus; 828 denarii from the Via Tritone, Rome, dating from Vespasian to Gordianus Pius; and 1669 small bronze coins from Pisidian Antioch in a fine state of preservation, dating from Valerian to Galerian. Many single specimens and many mediaeval coins were also added to the collections.

SYRACUSE.—Acquisitions of Ancient Coins.—In *Cronaca delle Belle Arti*, II, 1915, p. 84, P. ORSI reports the acquisition of fifty-six ancient coins by the museum at Syracuse during the year 1914–1915. Of these three were of gold, twenty-four of silver, and twenty-nine of bronze or copper. There were no great rarities among them, but a small bronze coin of Camarina is unpublished, and a small bronze of Messina is a new variant.

FRANCE

ALESIA.—The Latest Excavations.—In *B. Arch. C. T.* May, 1915, pp. 5–6; June, pp. 2–4, J. TOUTAIN points out that the equestrian group, one-quarter life size, recently found at Alesia, represented Epona. The bust of a woman in relief is probably a *Tutela*. Fifty-five more or less complete figurines were found representing Venus, and a draped male figure. Several fragments bear the name of the coroplast Pistillus.

PARIS.—The Arena of Lutetia.—In *C. R. Acad. Insc.* 1915, pp. 298–313 (plan; fig.), Dr. CAPITAN describes the excavations made in the arena of Lutetia in 1915, and discusses various problems suggested by the extant remains. Some of the walls uncovered in 1870 have since been destroyed. There was no substructure in the arena, and the foundations were slight (20 to 30 cm. in depth). Three human skeletons, two of them of women, were exhumed in 1915, and part of the skeleton of a camel.

GERMANY

BERLIN.—A Torso of a Fisherman.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 1–13 (pl.; 6 figs.), T. WIEGAND publishes a lifesize torso found at Aphrodisias about ten years ago and now in the Berlin museum. It is a replica of the figure of an aged fisherman known from several copies, one of which belonged to Rubens and was supposed to represent the dying Seneca. The torso is an excellent example of the work of the school of copyists located at Aphrodisias. The writer also calls attention to another torso of a fisherman found by him at Bunarbat near Smyrna and now in Berlin.

Two Recently Acquired Marble Heads.—In *Ber. Kunsts.* XXXV, 1914, cols. 317–324 (3 figs.), B. SCHRÖDER publishes two heads recently acquired by the Berlin museum. One is a female head 36 cm. high which dates from the



FIGURE 3.—HEAD OF GODDESS; GREEK, FOURTH CENTURY; BERLIN

fourth century B.C. (Fig. 3). Another replica is in the Ny Carlsberg Museum at Copenhagen (Catalogue, No. 48). The other seems to be the head of a Caryatid and dates from the latter part of the second century A.D. It came from the collection of Marschall von Bieberstein in Constantinople.

A Military Diploma.—In *Ber. Kunsts.* XXXV, 1914, cols. 340–348 (2 figs.), T. WIEGAND publishes a military diploma from Wiesbaden recently acquired by the Antiquarium at Berlin. It is a bronze plate 19.3 cm. high and 15 cm. wide with writing on both sides. The letters vary from 5 to 7 mm. in height. The diploma dates from the year 78 A.D. and is perfectly preserved.

LEIPZIG.—The Knust Prize.—The prize from the Knust Foundation, offered through the Philosophical Faculty of the University of Leipzig in June, 1912, for a study of the origins and elements of Etruscan art in architecture, painting, and decoration, has found no candidates. (*Arch. Anz.* 1915, col. 144.)

GREAT BRITAIN

EYEBURY.—The Excavation of Round Barrows.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 116–126 (5 figs.), E. T. LEEDS reports upon his excavation of two small tumuli near Eyebury, Peterborough. Tumulus B, which is 80 to 90 feet in diameter, contained four burials. Flint implements and a food vessel were found by the excavators. Tumulus C, which has about the same diameter, is now almost level. Scant remains of one body which had been cremated were found in it.

LONDON.—Recently Acquired Reliefs in the British Museum.—Fourteen Greek marble reliefs and one Roman are published by A. H. SMITH in *J. H. S.* XXXVI, 1916, pp. 65–86 (pl.; 15 figs.). They are: (1) A votive relief of the Carian god Zeus Stratius, a draped figure with double-axe and spear standing between Idrieus and Ada, who were the brother and sister of Mausolus and Artemisia and reigned after them. It was found at Tegea, and perhaps was dedicated by some workman who had gone from there with Scopas to work on the Mausoleum. (2) Attic grave stele with a graceful loutrophorus in relief and the names of Melantes and Menalces above spaces where their portraits may have been painted. An unusual feature is two lifelike doves perched on the spreading top of the vase as if to drink rain water from its basin. (3) Fragment of a grave relief on which a large loutrophorus flanked by two smaller ones stands above a symmetrical ornament of acanthus and two lively, winged lion-gryphons. (4–7) Grave reliefs with single figures: Statius, a boy standing and holding out a bird toward a missing pet dog (?); relief of a girl with mirror; upper parts with heads only, of Hieroclia and Clearete. (8) Small relief of Melitta, dedicated in some verses of more feeling than art, by her foster daughter, who is seen with her in the relief. (9–12) Stelae with family groups of three figures. Aristeis with his wife and daughter, early fourth century work; head of an old man, probably the middle figure of such a group; Archagora with her parents; Metagenes and Philumene and another woman, also typical fourth century work. (13–14) Sepulchral votive reliefs with a warrior in archaistic dress standing before a cippus with serpent, two of a number of versions of this subject which may go back to some relief in honor of an Athenian naval victory. No. 14, with the greater dimension horizontal, is cut on the side of a stone which had earlier stood on end and been inscribed on the two narrower faces. (15) An elaborate Roman marriage scene at which Mars, Juno Pronuba (?) and Victory and Fortune are in attendance, apparently the wedding of some distinguished military man. It was the panel of a sarcophagus.

MAIDEN BOWER.—An Earthwork of the Bronze Age.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 143–160 (8 figs.), W. G. SMITH describes the ancient earthwork at Maiden Bower, Bedfordshire. It is in the form of an irregular circle, 775 feet from north to south and 750 feet from east to west, and is almost surrounded by a vallum which had five, or perhaps seven, entrances. It dates from the Bronze Age. Outside the northwest entrance Roman vessels have been found at different times, including five broken paterae of Samian ware inscribed with potters' names already known. One name PPIMANI appears in the Pudding-Pan Rock series.

STRATFORD-ON-AVON.—A Penannular Brooch.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 96–98 (3 figs.), R. SMITH publishes a penannular brooch recently found at Stratford-on-Avon. It is 3.4 in. in diameter, and has the front of the hoop engraved with transverse lines which give it the appearance of being wound with wire. It is the best specimen known of this type of brooch, which dates from the period between the end of the Roman occupation of Britain and the Teutonic invasions.

WOTTON.—An Ancient British Waterclock.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 76–94 (15 figs.), R. SMITH publishes ten bronze vessels recently found at Wotton, Surrey. They are of different sizes and were packed

together in a large caldron. The six smaller vessels are well preserved. A small hole in the centre of the vessels suggests that they were used for measuring time. The bowl was placed upon the surface of the water and when it filled and sank the period was over. The writer believes that a flat vessel may have been used as a gong by an attendant to call attention to the end of a period, as is done in India.

NORTHERN AFRICA

CYRENE.—A Statue of Zeus with the Aegis.—On August 25, 1915, there was found by chance on the acropolis of Cyrene a statue of Zeus, 2.15 m. high, of Parian marble. The god is standing nude with the aegis over his left arm. The right arm is gone from the shoulder, the left from above the elbow, and both legs from the knees. The statue is of Hellenistic date, and is the most important example extant of Zeus with the aegis. (*Cronaca delle Belle Arti*, II, 1915, pp. 81-82; fig.)

DJEMILA.—Inscriptions.—In *C. R. Acad. Insc.* 1915, pp. 316-323, R. CAGNAT publishes and discusses seven Latin inscriptions which have to do with C. Cosinius Maximus and his brother L. Cosinius Primus, benefactors of the town of Cuicul. Most of these inscriptions, which date from the time of Antoninus Pius, have recently been found in Djemila.

GIGTHIS.—A Bilingual Inscription.—In *B. Arch. C. T.* June, 1915, p. 17, DUSSAUD publishes a note on a Neo-Punic and Latin inscription found at Gigthis. He translates the Semitic part, "Himlik, son of Safat, son of Hannibal, of Soba(?)." Below is the Latin name *Lupercus*.

THUBURBO MAJUS.—Inscriptions.—In *C. R. Acad. Insc.* 1915, pp. 325-332, L. POINSSOT publishes three inscriptions recently excavated by prisoners of war at Thuburbo Majus. One of them proves that the *Genius municipii* was the goddess Caelestis. At Thuburbo Majus there existed side by side a *colonia* founded by Augustus and a *civitas* which later, probably under Hadrian, became a *municipium*.

TUNISIA.—Miscellaneous Antiquities.—In *B. Arch. C. T.* May, 1915, pp. 14-23 (fig.), M. MERLIN records several discoveries in Tunisia in 1914. At **Abbir** six Latin inscriptions were found, three of which were on statue bases; near **Kasserine** two Latin inscriptions, one of which is a mile-stone; in the baths at **El-Djem** fragments of an inscription; from **El-Aouja** several vases of a red ware with applied reliefs, now in the Bardo museum; at **Sousse** a base with an honorary Latin inscription, and a Roman house with mosaics. *Ibid.* June, pp. 7-16 (3 figs.), the same writer records the discovery at **Thala** of a dedication to Caelestis; also an ex-voto with three zones of reliefs. In the lowest zone in a niche to the right stands a woman with her right hand on an altar and in her left a cornucopia; in a similar niche to the left was a man. In the zone above are sphinxes and what may be a dolphin; and above these crossed cornucopias and the sun. He also reports the following acquisitions of the Bardo museum: a square terra-cotta with a Christian relief, provenance unknown; a Christian lamp from Henchir-Jouada; several pieces of glass; a bronze mirror from Carthage with figures of the Graces on the cover; a statuette of terra-cotta representing a woman carrying a child; another with the head of a monkey; a vase of grayish red color in the shape of a pine cone; vase fragments from Henchir-Bou-Gornine in southern Tunisia with inscriptions in ink, dating from the sixth century A.D.

UNITED STATES

BOSTON.—Acquisitions of the Museum of Fine Arts.—In the *Fortieth Annual Report* of the Museum of Fine Arts, Boston, pp. 96–97, L. D. CASKEY records the acquisition by the Museum of the head of a goddess of Parian marble which had been worked for insertion in a draped statue of colossal size (Fig. 4). Its height is 47 cm. The head is slightly inclined to the left, and has a veil; the greater part of the nose, lips and chin are broken off, and the surface is marred in many places. It is a fourth century original of a sculptor strongly influenced by Praxiteles. It may represent Demeter. (See also *B. Mus. F. A.* XIV, 1916, pp. 9–11; 2 figs.) There were also acquired two bronze statuettes found at Lake Nemi. Among the objects loaned the museum are an Etruscan gold fibula representing a mule, of seventh century date (published in *J.R.S.* IV, 1914, pp. 16 ff.); and an unsigned cylix of Douris with figures of Sileni and Maenads.

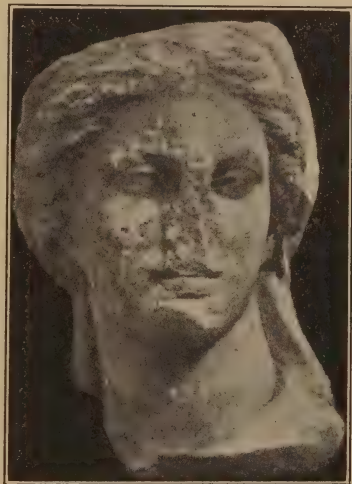


FIGURE 4.—HEAD OF GODDESS;
GREEK, FOURTH CENTURY; BOSTON

NEW YORK.—Egyptian Antiquities Acquired by the Metropolitan Museum.—The following Egyptian antiquities have been acquired by the Metropolitan Museum: Two pottery bowls and twenty-three pots of predynastic date; a bronze axe of the Middle Kingdom; two pottery jugs of the early eighteenth dynasty; a female figure of limestone on a bed, a terra-cotta Canopic jar of Teti with the lid, an ebony Osiride figure of Amenhotep III and fragments of two others; a steatite scarab mounted in a gold ring, all of the eighteenth dynasty; thirty-three pottery cones, of the Empire; a bronze mace and a bronze lance head of the Graeco-Roman period. (*B. Metr. Mus.* XI, 1916, p. 26.) From the north pyramid at Lisht came 1,704 objects, consisting of limestone reliefs, wooden coffins, Canopic jars, statuettes, pots, implements, beads, scarabs and amulets, and other miscellaneous objects of flint, bronze, ivory, glass, and faience, dating from the twelfth to the twenty-second dynasty. There were also acquired twenty-two flint implements of the predynastic period, and twenty-three pairs and other fragments of “pan-grave” horns and antlers. From the oasis of Kharga came a fragment of enameled glass dating from the fourth century A.D. (*Ibid.* p. 51.)

Four Marble Heads.—In *B. Metr. Mus.* XI, 1916, pp. 38–42 (3 figs.), Miss G. M. A. R(ichter) publishes three marble heads acquired by the Metropolitan Museum in 1915. One of these is a portrait of a man of the

Flavian period (Fig. 5), an excellent example of Roman sculpture of the latter part of the first century A.D. The hair may have been painted. The second is a Roman portrait of a bearded man, dating from the third century A.D. The third is a head of a young girl of late Greek date. It is 21.3 cm. high, and shows the influence of Praxiteles. The back of the head is unfinished, and at the top is a cutting for the insertion of another piece. *Ibid.*



FIGURE 5.—ROMAN PORTRAIT; METROPOLITAN MUSEUM

pp. 81-84 (3 figs.) the same writer publishes another acquisition, the bust of an athlete (Fig. 6). It is a Greek original of the fourth century and shows strong affiliations with Praxiteles, though probably not by the master himself.

EARLY CHRISTIAN, BYZANTINE, MEDIAEVAL AND RENAISSANCE ART

ITALY

UNPUBLISHED WORKS OF BICCI DI LORENZO.—In *Rass. d'Arte*, XV, 1915, pp. 209-214 (pl.; 11 figs.), M. L. BERENSON catalogues a large number of unpublished works of Bicci di Lorenzo and illustrates the following: Visitation, Velletri, chapter house of the cathedral; Annunciation, Baltimore, Walters collection; two predella panels representing scenes of the life of St. Nicholas and originally attached to a Madonna now at Parma, one of them, St. Nicholas giving the balls of gold, in the Metropolitan Museum, the other, St. Nicholas resurrecting the three youths, in the Butler sale, London, 1911; two panels with St. James and St. Anthony, St. John the Baptist and St. Christopher, both at Rome in the Doria gallery; two Madonnas, each

with two saints, and a pair of panel saints, St. Catherine and St. Mary Magdalene,—all four in unknown private possession.

ATTRIBUTIONS TO ANTONIAZZO ROMANO.—In *Rass. d'Arte*; XV, 1915, pp. 215–217 (2 figs.) G. BERNARDINI publishes a Madonna in the rural church S. Maria al Prato, Campagnano Romano, as a work of Antoniazzo Romano, who is known to have painted an altarpiece for this church. This panel, however, cannot be a part of the recorded commission. There is also at the same place a Virgin *orante* in the artist's manner. Three pictures in Spain are tentatively listed among Antoniazzo's works: a detached fresco of a Madonna in the Prado; a polyptych with a half-length Redeemer between standing figures of St. John the Baptist and St. Peter, No. 134, in the museum of ancient history at Madrid; a Madonna of the Valencia museum, tempera on panel.

AREZZO.—The *Madonna delle Lacrime*.—In *Rass. d'Arte*, XV, 1915, pp. 263–264 (2 figs.), M. SALMI publishes the terra-cotta relief of the *Madonna delle Lacrime* in the *Annunziata* of Arezzo and ascribes the statue to the famous anonymous Master of the Pellegrini chapel. This Madonna is known to be the gift of Carlo Marsuppini; its closest companion is a Madonna in the Bargello attributed to the same artist.



FIGURE 6.—BUST OF ATHLETE;
GREEK, IV CENTURY; METROPOL-
ITAN MUSEUM

CASALE MONFERRATO.—A Relief by Matteo Sanmicheli.—In *L'Arte*, XIX, 1916, pp. 21–24 (fig.), P. D'ANCONA publishes a fragment of the dismembered tomb of Maria of Serbia erected in S. Francesco at Casale Monferrato by the architect and sculptor Matteo Sanmicheli. A genius with inverted torch was all of the monument that was previously known. The new relief has a pedantic symbolism of the virtuous life and its reward.

FERRARA.—Documents for the Minor Arts.—In *L'Arte*, XIX, 1916, pp. 55–57, A. VENTURI publishes notices gleaned from the archives of Ferrara relating to the wood-carvers and inlayers at the court of Ferrara in the late fifteenth century and early sixteenth.

MAIANO.—Frescoes by Utili.—In *Boll. Arte*, X, 1916, pp. 83–86 (3 figs.), O. H. GIGLIOLI publishes the fresco decoration of a tabernacle standing near the church of Maiano (Fiesole) and assigns them to a comparatively obscure painter of the early sixteenth century, a *ritardato*, Giovanni Battista Utili of Faenza.

MILAN.—New Acquisitions of the Castello Sforzesco.—In *Rass. d'Arte*, XV, 1915, pp. 253–256 (pl.; 3 figs.), L. BELTRAMI describes the silver tabernacle from the church of S. Lorenzo in Voghera, dated 1406, and the Holy Family by Daniele Cresspi, both recently acquired with the fund given by the Countess Luisa Morelli di Popolo.

MODENA.—A New Mantegna.—In *L'Arte*, XIX, 1916, pp. 65–69 (4 figs.), G. FRIZZONI publishes a painting of the Redeemer in bust full face with



FIGURE 7.—STATUETTE OF ST. ANTHONY; PADUA

both hands showing, and announces it as a genuine Mantegna newly added to the Campori collection, Modena. The picture is executed in tempera on a thin linen canvas and has suffered considerably. The lower left corner has been rubbed off and with it all the artist's signature save the last two letters. The date, 1493, is spared. The provenance remains a mystery.

PADUA.—Terra-cotta Sketches by Donatello in the Museo del Santo.—In *L'Arte*, XIX, 1916, pp. 51–54 (8 figs.), A. VENTURI publishes two terra-cotta statuettes in the Museo del Santo, Padua (Figs. 7 and 8), and ascribes

them to Donatello. He identifies the two as studies preparatory to the bronze statues of St. Anthony and St. Louis which Donatello cast for the high altar of the church of the Santo.

ROME.—Official Report on the Operations in the Catacombs.—In *N. Bull. Arch. Crist.* XXI, 1915, pp. 143–159 (5 figs.), R. KANZLER writes the official report of the Commissione di Archeologia Sacra on the catacomb excavations. In the Catacombs of Priscilla the explorations in the neighbor-



FIGURE 8.—STATUETTE OF ST. LOUIS; PADUA

hood of the Cappella Greca in 1914–15 yielded a large number of inscriptions. Among various finds in the Catacombs of Domitilla the most important is a *graffito* representing a man seated in a *cathedra* approached by another who lays hold of him. It had been found previously by Armellini but not removed to safety. The newly discovered region of the Jewish cemetery on the Via Portuense yielded many inscriptions, some in Hebrew. Since the catacombs could not be preserved the plan is published and the inscriptions

and other antiquities removed to the Lateran Sala Giudaica (see *A.J.A.* 1915, p. 491). A new burial region was found within the Villa Reale to the left of the Via Salaria Nuova, and most important excavations undertaken at S. Sebastiano.

The Excavations at S. Sebastiano.—In *N. Bull. Arch. Crist.* XXII, 1916, pp. 5–61 (5 pls.; fig.), O. MARUCCHI discusses the recent discoveries at S. Sebastiano. The tradition that the relics of the two apostles were removed here from the Vatican and the Via Ostiense respectively to prevent profanation and subsequently returned to their respective titular churches has always had good literary basis. The new excavations add monumental evidence in the form of *graffiti*. Among various scratched invocations to Sts. Peter and Paul the *refrigerium* ceremony is repeatedly mentioned, an indisputable proof of the presence of their relics, for that ceremony is exclusively sepulchral. These *graffiti* were not, however, found in the so-called Platonía where the monument to the two apostles is located, but approximately beneath the former situation of the altar of the relics, just behind the present crypt of St. Sebastian in a subterranean room which was fitted out for use in the *agape* and libation rites. A *graffito*, very difficult of decipherment, records the visit to this same chamber for the lustration rite of some of the Christians of Pannonia attracted hither with the relics of St. Quirinus, that were moved to Rome, according to the new interpretation of Prudentius here given, before the end of the fourth century. The fact that the relics of St. Quirinus were deposited in the Platonía is epigraphically attested by a well-known inscription, but the exact place is unknown, though most likely the *arcosolium* destroyed by the stairs which Cardinal Borghese built at the back was that of St. Quirinus. The monument in the centre of the Platonía is a double cenotaph, which precludes its having been used as the tomb of St. Quirinus who has no companion saint. Furthermore, an examination of the monument proves it was never used or intended to be used as an actual depository of any sort; it was built as a cenotaph and is intact in its original condition. It must be commemorative of the two apostles, whose remains lay, according to the tradition, concealed in a neighboring well. The date and circumstances of the translation of the apostolic relics to and from these, the catacombs *par excellence*, are still matters of conjecture. The *Feriale Romano* seems to indicate the year 258, the consulship of Tuscus and Bassus, as that in which the first translation took place. The cenotaph which was put up supposedly at or after their removal is probably of the time of Damasus, surely of the fourth century.

The Supposed Baptistery of the Cappella Greca.—In *N. Bull. Arch. Crist.* XXI, 1915, pp. 161–165 (fig.), O. MARUCCHI points out that the new excavations prove conclusively that the room supposed by Profumo to be the baptistery of the Cappella Greca was built originally as a *piscina* and when converted to other purposes by the Christians was never in immediate communication with the Cappella Greca, hence not its baptistery.

Discovery of the Cemetery of San Ciriaco.—In *N. Bull. Arch. Crist.* XXII, 1916, pp. 101–102, G. S. GRAZIOSI announces the discovery of the surface cemetery of San Ciriaco, famous in early Christian times, seven Roman miles (10 to 11 km.) out on the Via Ostense. Important sarcophagi, some figured, one with original fastening, and a small basilica are among the finds already made.

Various Catacomb Explorations.—In *N. Bull. Arch. Crist.* XXII, 1916, pp. 63–94, G. S. GRAZIOSI gives an account of his recent explorations in various early Christian cemeteries of Rome. He reports a new gallery with many skeletons *in situ* in the Catacombs of Pamfilo on the Via Salaria Vecchia. In 1865 De Rossi saw here some important scenes alluding to the abolition of idolatry and it is hoped they may be rediscovered. The writer publishes new or recomposed and corrected inscriptions of interest from the cemeteries of Ermete and Commodilla. He adds the following notes on the inscriptions of Damasus. A new fragment of a Damasian inscription has been recovered at SS. Cosma e Damiano, but since it does not fit with the inscription to Sts. Marcus and Marcellianus found in that church it may belong to an inscription of their father, St. Tranquillinus, whose relics were transferred here at the same time as those of the sons. De Rossi recorded fragments of an inscription in the general neighborhood of the burial place of Tranquillinus and related saints. Some suggestions for the restoration of other inscriptions of Damasus are added and his imitation of Lucretius pointed out.

New Catacombs with Frescoes.—In *N. Bull. Arch. Crist.* XXII, 1916, p. 102, R. KANZLER reports new catacombs in the Vassalli vineyard about two Roman miles out on the Via Appia Antica. The deep galleries grouped about a stair contain two *arcosolia* decorated with scenes of the chase and vintage.

TICINO.—Cristoforo and Nicolao da Seregno.—In *Rass. d'Arte*, XV, 1915, pp. 265–276 (11 figs.), L. BRENTANI offers an important contribution to the history of fifteenth century painting in the Canton Ticino by resurrecting with numerous documents and attributions the two prolific frescanti Cristoforo and Nicolao da Seregno of Lugano.

FRANCE

PARIS.—A Drawing by Dürer.—In *Burl. Mag.* XXVIII, 1916, p. 213 (pl.), C. DODGSON publishes a drawing in India ink of the Brazen Serpent, dated 1512, and attributes it to Albrecht Dürer. The sheet belongs to Eugène Rodrigues, Paris.

A Drawing by Jacquemart de Hesdin.—In *Burl. Mag.* XXIX, 1916, pp. 45–49 (pl.), M. CONWAY reviews Lasteyrie's differentiation of the works of the two French illuminators, Beauneveu and Jacquemart de Hesdin. He ascribes to the latter a drawing in the Louvre, representing the dormition and the coronation of the Virgin. The drawing is of interest because it illustrates the beginnings from which the Van Limburgs grew, though it is true that their works, *e.g.* the Chantilly Hours, show also marked Italian influence.

GERMANY

BRESLAU.—A Portrait of Michelangelo.—In *Mh. f. Kunstw.* VIII, 1915, pp. 431–432 (fig.), E. STEINMANN publishes another copy of Jacopo del Conte's portrait of Michelangelo in the Breslau Stadtbibliothek.

SWEDEN

SKÅ.—A Cope of Opus Anglicanum.—In *Burl. Mag.* XXVIII, 1916, pp. 178-185 (2 pls.), A. LINDBLOM describes the orphrey of a fourteenth century cope of *opus anglicanum* discovered in 1914 in the little parochial church of Skå in the diocese of Uppsala. The precious vestment probably came to the church through the residence of the Swedish royal pair Magnus Eriksson (reigned 1319-1363) and Blanche of Namur in the neighboring castle of Svartsjö. It is entered for the last time in an inventory of 1620. Soon after it was taken to pieces and the orphrey, divided into three strips with traces of the silk body of the cope to which it had been attached, was found as decoration on an altar-frontal. Nine scenes of the Passion framed in rich arcading are preserved. Only the Crucifixion in the middle and one end scene, the Incredulity of St. Thomas or the Supper at Emmaus, have been lost. The technique, ornament, and iconography are intimately related to the other examples of *opus anglicanum* embroidery and particularly to the famous cope of St. John Lateran. In fact both seem to come from one workshop, to which can be ascribed also a cope presented in 1309 to the cathedral of Saint-Bertrand of Comminges, the Vich, the J. E. Butler-Bowdon, the Pienza, and the Steeple Aston copes, as well as the five cushions from Catworth at South Kensington. The cushions have armorial bearings that serve to date the Skå embroidery, too, in the second quarter of the fourteenth century. This workshop was probably in London, for the richness of the work implies a great commercial centre and on some of the embroideries Edward the Confessor is represented with the model of a church which can hardly be other than Westminster. This school of broderers is distinct from the contemporary school which produced the five Jesse Trees, the Daroca and Syon copes, etc., and there are many similarities between the iconography of the embroidered scenes and the iconography of the East Anglian school of illuminated manuscripts. Presumably the ornament and scenes were worked out first in the more facile medium.

GREAT BRITAIN

LINDISFARNE.—A Saxon Pillow-Stone.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 132-136 (3 figs.), C. R. PEERS publishes a so-called "pillow-stone" found at Lindisfarne, Northumbria, in 1915. It is of hard, red sandstone, $8\frac{1}{2}$ in. high and $6\frac{1}{4}$ in. wide, tapering to $5\frac{1}{2}$ in., and bears the name OSGYTH in Saxon letters preceded by a cross. Above is the same name in runes. Where the arms of the cross meet is a circular sinking; and at the ends of the arms are semicircles with double lines which run around the edge of the stone. The name is a woman's name.

LONDON.—An Attribution to Bartolomeo di Giovanni.—In *Burl. Mag.* XXIX, 1916, p. 3 (pl.), R. E. FRY publishes as a picture by Bartolomeo di Giovanni, a St. Catherine of Alexandria, tempera on panel, in the collection of H. Harris, London. If authentic it is an important example of this artist otherwise known mainly for his predella panels for Ghirlandaio's altarpieces.

Two Early Woodcuts in the British Museum.—In *Burl. Mag.* XXIX, 1916, pp. 6-11 (2 pls.), C. DODGSON publishes two early woodcuts from the Sotheby

collection that have been added to the print department of the British Museum. One represents St. Nicholas of Myra (*i.e.* Santa Claus) distributing at night the marriage portion to the three poor sisters. It is one of the finest woodcuts of its date, 1440-1450, because of its excellent preservation, large size, firm drawing, and harmonious coloring. The other represents the Virgin, the Child, and St. Anna with a special prayer for time of pestilence inscribed below. The colors and dialect suggest Augsburg; it is of the end of the fifteenth century.

A Portrait by Bugiardini.—In *Burl. Mag.* XXIX, 1916, pp. 11-12 (pl.), T. BORENIUS attributes to Giuliano Bugiardini a portrait of an unknown man, oil on panel, owned by P. W. Steer, London. The picture resembles La Monaca of the Pitti and Bugiardini's portrait of Michelangelo which though lost is known by the copy in the Louvre.

The New De Hooch at the National Gallery.—In *Burl. Mag.* XXIX, 1916, pp. 25-26 (pl.), D. S. MACCOLL sharply criticizes the new De Hooch at the National Gallery, a Music Party, as a very inferior picture of the artist's last gasp. It is the last dated work of the artist and chiefly interesting because it shows how far he declined from his prime; it is not worthy of a place beside his already excellent representation in the British collection or of the expenditure of public funds.

Documents Relating to London Broderers.—In *Burl. Mag.* XXIX, 1916, p. 74, W. R. LETHABY publishes some documents on the broderers of London in the fourteenth century. One is the contract made in 1307 for a choir cope to be completed by Alexander le Settere for forty pounds, a sum which would be equal to some twenty times as much in modern money. Two other documents deal with a cope bought for thirty pounds by the mayor and corporation to present to the Bishop of Worcester on his consecration at Canterbury. Another record is the will of Thomas Carlton, a broderer who died in 1388 in good circumstances; he left property to the master and wardens of the Merchant Tailors with which guild the broderers seem to have been banded at that time.

LONGNIDDY.—**A Masolino Emigrates to America.**—In *Burl. Mag.* XXIX, 1916, p. 45 (pl.), T. BORENIUS illustrates the Annunciation by Masolino which has recently come to America from the collection of Earl Wemyss at Gosford House, Longniddy.

OLD SARUM.—**Excavations in 1914.**—In *Proc. Soc. Ant.* XXVII, 1915, pp. 230-238 (2 figs.), W. HAWLEY reports upon the excavations up to the breaking out of the war in 1914. North of the cathedral was a piece of wall extending 105 feet from the town wall to the northwest corner of the church. It probably bounded a terrace. Parallel with this wall were foundations of a building which may have been used for lodgings for the household, while above were the living-rooms of the bishop. The southern end of the building was connected by a gallery with the hall. West of the north transept of the church a small building not yet identified was uncovered.

OXFORD.—**A Set of Burgkmair's Genealogy of Maximilian.**—In *Burl. Mag.* XXVIII, 1916, pp. 138-144 (pl.), C. DODGSON describes the series of eighty-four woodcuts, no duplicates, of Hans Burgkmair's *Genealogy of Maximilian*, recently brought to light in the Douce collection of the Ashmolean Museum at Oxford. The Oxford set includes one unique print, otherwise

known only by a copy at Berlin in a series of pen drawings derived from the *Genealogy*.

RICHMOND.—A New Rembrandt.—In *Burl. Mag.* XXIX, 1916, p. 91 (2 pls.), P. J. CELS publishes a newly discovered early picture by Rembrandt that has been purchased by Herbert Cook for Doughty House, Richmond. The canvas is signed and dated 1633; it represents St. Peter. Though hitherto absolutely unknown, its authenticity is unquestioned and it is very characteristic of the period at which it was painted. The model is the old man represented in three pictures of the previous year, 1632: St. Peter, Statensmuseum, Stockholm; Der Mann mit der Kupfernase, Kgl. Gemäldegalerie, Cassel; Portrait, Fitzwilliam collection, Peterborough.

UNITED STATES

BOSTON.—Early Italian Paintings in the Museum Depot.—In *B. Mus. F. A.* XIV, 1916, pp. 11–15 (7 figs.), O. SIRÉN gives his opinion of Italian pictures in imperfect condition in the storerooms of the Museum of Fine Arts. He ascribes the wing of an altarpiece with two standing and two kneeling saints to Fra Filippo Lippi, a Nativity to Taddeo Gaddi, and a Madonna each to Spinello Aretino, Ambrogio di Baldese, Lorenzo di Niccolò Gerini, and Giovanni Battista Utile da Faenza. The painter of the exhibited Madonna labeled School of Lorenzo Monaco is more definitely named as Mariotto di Nardo.

A Recent Addition to the Museum of Fine Arts.—A curious Sieneſe Marriage of St. Catherine, in a ſtyle not far from that of Lippo Memmi, has been obtained for the Boston museum from the Sarah Wyman Whitman fund. (*B. Mus. F. A.* XIV, 1916, p. 2; fig.)

BROOKLYN.—An Altarpiece by Luini.—The Brooklyn museum has recently acquired from the Lambert collection a beautiful Madonna Enthroned, by Bernardino Luini. The picture, which was painted about 1510, is an altarpiece 94 by 54 inches. It was formerly in a private collection in North Cumberland. (W. H. G[OODYEAR], *The Brooklyn Museum Quarterly*, III, 1916, pp. 53–57; 2 figs.)

CHICAGO.—Ayer Collection of Manuscripts and Books in the Art Institute.—A collection of oriental and western manuscripts and early illustrated books has been loaned to the Chicago Art Institute by E. E. Ayer. (*B. Art. Inst. Chicago*, X, 1916, pp. 171–172; fig.)

MINNEAPOLIS.—A New Tapestry in the Institute of Arts.—A Joseph tapestry, Brussels, middle of the ſixteenth century, has been loaned to the Institute of Arts, Minneapolis, by Mrs. C. J. Martin, donor of the collection of tapeſtries there. (*B. Minn. I. A.* V, 1916, pp. 11–12; fig.)

NEW YORK.—Christian Grave Stelae.—The Metropolitan Museum of New York has recently been preſented with three Chriſtian grave ſtelae from Erment. Two of them are deſcribed and the inſcriptions recorded by H. G. E(VELYN)-W(HITE) in *B. Metr. Mus.* XI, 1916, pp. 48–49 (fig.).

An Attribution to Mazzola.—In *Art in America*, IV, 1916, pp. 113–114 (fig.), F. J. MATHER attributes tentatively to Filippo Mazzola a portrait of an unknown lady poſed in front of what appears to be the ducal palace at Mantua. The picture, now owned by G. Breck, New York, bears on a nearly effaced *cartellino* diſputable traces of the ariſt's ſignature.

Acquisitions of the Metropolitan Museum.—Recent additions to the Metropolitan Museum by gift from J. P. Morgan are the Colonna Madonna



FIGURE 9.—THE COLONNA RAPHAEL; METROPOLITAN MUSEUM

by Raphael (Fig. 9), the early sixteenth century groups of the Entombment and Pietà (Fig. 10) from the Château de Biron in Périgord, and practically all the mediaeval section of the Hoentschel collection. (*B. Metr. Mus.* XI, 1916, pp. 56-58; 3 figs.) An Imaginary Landscape of Patinir type was bought at the sale of the pictures of Nicholas Riabouchinsky. (*Ibid.* pp. 129-130.)

PRINCETON.—A Venetian Doorway.—In *Art in America*, IV, 1916, pp. 142-146 (fig.), A. MARQUAND publishes a Venetian doorway at Guern-



FIGURE 10.—PIETÀ FROM THE CHÂTEAU DE BIRON; METROPOLITAN MUSEUM

sey Hall, Princeton, and attributes it to Pietro Lombardo or his immediate circle about the period 1480-1485. Its provenance is unknown though the great similarity to the decorations of the Scuola di San Marco suggests that it came thence.

WORCESTER.—A Panel by Pesellino.—In *L'Arte*, XIX, 1916, pp. 70-71 (3 figs.), F. M. PERKINS reproduces, with its two companion pieces in the Doria gallery, Rome, the predella panel by Pesellino purchased from an English collection by P. N. Gentner, director of the Worcester museum. The three panels represent scenes of the life of the saint Pope Sylvester. It is unknown to what altarpiece they originally belonged.

AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

CALIFORNIA.—Composition of Shell Mounds.—In the University of California *Publications in Amer. Arch. and Ethn.* XII, pp. 1-29, E. W. GIFFORD gives the compositions of the shell mounds, and estimates the length of time for their accumulation.

MASSACHUSETTS.—Notes on Explorations of Martha's Vineyard.—In *Amer. Anth.* N. S. XVIII, pp. 81–97 (2 pls.; 16 figs.), S. J. GUERNSEY describes explorations which he made in 1912 and 1913 in the western portion of Martha's Vineyard. He tells of hut rings, village sites, fire-pits, canals, shell deposits, and burial places. A full description of the archaeological objects found in the different sites is given. *Ibid.* pp. 98–104 (3 pls.), E. A. HOOTON describes and gives measurements of the skeletal material found on the above sites. One of the skulls is exceptionally broad for a New England cranium.

NEW MEXICO.—Zuni Culture Sequences.—In *Museum of the Affiliated Colleges*, San Francisco, December 8, 1915, and in the *Anthropological Papers of the American Museum*, XVIII, Part I (with title 'Zuni Potsherds,'), A. L. KROEBER discusses the sequences in time of pottery types in the Zuni area. On the basis of the proportions of the different types of pottery, he divides the history of the region into three epochs, the present, A, and B. B is subdivided into early, middle, and late, and A into early and late.

NEW JERSEY.—Physical Anthropology of the Lenape.—In *Bulletin* 62, Bureau of American Ethnology, A. HRDLICKA describes and gives measurements of a collection of fifty-seven skeletons from the Munsee burial site. The report includes a map of the distribution of dolicocephalic and brachycephalic types in the eastern part of the United States, and twenty-nine plates. Skeletal material from other regions is used in comparison with the Munsee collection.

RANCOCAS CREEK.—A Pre-Lenape Site.—In *Anthropological Publications* of the Museum of the University of Pennsylvania VI, pp. 49–77 (9 pls.; 2 figs.), E. W. HAWES and R. LINTON describe an exploration near Trenton. They failed to find Volk's palaeolithic culture of glacial age; but they verified his conclusions in regard to a lower crude argillite culture in the yellow soil, and a later Lenape culture found in the black soil. They found also many hitherto unknown types of implements and objects from the yellow soil people, including a large number of banner stones. An intermediate and transitional culture showing improved argillite implements and some pottery was discovered. The authors conclude that the yellow soil culture is pre-Lenape, but not pre-Indian as has been contended.

OHIO.—Exploration of the Tremper Mound.—In the *Ohio Arch. and Hist. Quarterly*, XXV, pp. 263–398 (125 figs.), W. C. MILLS describes the exploration of the Tremper mound in Scioto County, Ohio. It was first described by Squier and Davis in 1846, who thought it an effigy mound; but Mills considers it to be merely an irregular form. The mound was largely of earth. Over six hundred post-holes in the floor or base showed that there had once been several rooms in it. The structure seems to have been burned before the actual mound was placed over it. Some rooms were used as crematories, others for the disposal of the ashes and still others for caching the funeral objects. One hundred and forty-five pipes were found on the site. Eighty of these were effigy forms, including otters, raccoons, wolves, fox, dog, bear, mountain lion, wild-cat, porcupine, opossum, beaver, deer, mink, rabbit, squirrel, turtles, toad, and many birds. There were also many of the familiar monitor type. Other characteristic objects of the culture are also described.



MARBLE HEAD OF A GODDESS



MARBLE HEAD OF A GODDESS



MARBLE HEAD OF A GODDESS

A GREEK HEAD OF A GODDESS IN THE
MUSEUM OF FINE ARTS, BOSTON

[PLATES XVI-XVIII]

THE head here illustrated on Plates XVI-XVIII was acquired in 1915 by the Museum of Fine Arts, and has been briefly discussed in the Bulletin of the Museum.¹ Unfortunately the photographs fail entirely to do justice to the quality of the work: those taken from the marble itself reveal nothing so clearly as its cruelly mutilated condition; and on that made from a cast, while the effect of the injuries is less disturbing, some details of the modelling are unduly accentuated. The illustrations will, however, suffice to show that we have to do with an original from the hand of a master of the fourth century B.C., who has been able to combine in his conception of a matronly goddess great majesty and force with a truly Praxitelean softness and gentleness of expression.

If the character of the face did not render arguing on the subject superfluous, the heroic size of the head would prove it to be a representation of a goddess rather than a human being. The total height of the fragment is 0.47 m., the length of the face approximately 0.25 m. The head is thus about one third larger than life, and is probably from a cult statue in a temple. No details as to its provenance have been ascertained; but there are grounds for believing that it was brought directly to America from Greece, and it is said to have been found in the neighborhood of Athens.

The material is Parian marble of fine quality. Like the heads of numerous Greek draped statues of the fourth century and later, this head was carved separately for insertion in the torso. The block included part of the breast and shoulders; its base

¹ *B. Mus. F. A.* XIV, 1915, p. 10, Reg. No. 15.856. *Annual Report of the Museum of Fine Arts*, 1915, p. 96. The head also formed the subject of a paper read at the annual meeting of the Archaeological Institute, at Princeton University, December 29, 1915.

is worked in two oblique planes with roughly tooled surfaces which met at the bottom in a ridge. The plane on the left side, with part of the shoulder, is preserved; on the right side and in front the marble is broken off at the base of the neck. In accordance with another practice of Greek sculptors for which numerous parallels can be found in works of the fourth century, the top of the head, now missing, was made of a separate piece. The joint is a circular plane 24 cm. in diameter, sloping downward from left to right, with its surface roughly worked, except for a narrow contact band around the edge (cf. Fig. 1). In it, about 9 cm. from the front, is a cylindrical dowel hole 3.5 cm. deep. Evidently the block of marble at the sculptor's disposal was not large enough for his purpose, as appears also from the fact that the upper part of the head has less than its proper depth from front to back.¹

The injuries which the head has suffered are as follows: the greater portions of the nose, lips and chin are broken off; a fragment of the veil on the left side is missing; the eyebrows and eyelids and the hair on the left side are chipped or worn; and there are numerous scars, especially on the right side of the head. The worst of these injuries occurred long ago; others are evidently of quite recent origin, and suggest that the head was found lying a little below the level of the soil, with its right side upward. Here its surface shows a brown, earthy stain, numerous marks left by the roots of plants, and more than twenty scars due to the careless finder's pick. But fortunately there are some items also to be set down on the credit side of the account. One of the chief beauties of the work is the majestic as well as graceful poise of the head, and this could not be appreciated if the neck had not been preserved intact. And, in spite of all the disfigurements,

¹The Hermes of Praxiteles affords several instances of such piecing of details. The veil which covered the head of a goddess from Chios in Boston was made separately. A closer analogy is furnished by the Leconfield Aphrodite, where the back of the head is of a separate piece still securely attached (cf. Furtwängler, *Masterpieces*, p. 343). The missing portion at the back of the Aberdeen head of Heracles was also probably added; Mrs. Strong's theory (in Furtwängler, *op. cit.* p. 347) that the head was cut down to fit it into a pediment is less probable. In all these cases the paint on the hair or the veil would serve to conceal the joints. In later times the practice of making statues in several pieces became much more frequent. Arndt (in text to Brunn-Bruckmann, *Denkmäler*, pl. 550) holds it to be a technical characteristic especially of the late Hellenistic period. Damophon's group at Lycosoura shows it carried to an extreme (cf. Dickens, *B.S.A.* XIII, p. 384).

the surface of the marble is in many places—as on the forehead, the parts near the inner angle of the left eye, along the left side of the nose and on the whole of the neck—nearly as fresh as when it left the sculptor's hands. Fortunately it has escaped the process of cleansing with acid. The left side, which was less exposed to the moisture in the soil, is covered by a patina of a warm, creamy tone which greatly enhances the beauty of the fragment.

The pose of the statue cannot be determined from the remains; but the erect carriage of the head, indicated by the angle which the chin makes with the neck, suggests that the figure was standing rather than seated. The left shoulder was raised, and the head was inclined and turned slightly in that direction, so that it must have appeared almost in three-quarter view as one stood in front of the statue. That this is the point of view from which the artist intended the face to be seen is proved by certain details of workmanship. The back of the head (cf. Fig. 1) is neglected entirely; it is merely blocked out in the rough. Both ears are very carelessly rendered, but the left is the less finished of the two. And, what is more significant, the sides of the face are not symmetrical, as may clearly be seen in the direct front view on PLATE XVIII. The ridge of the nose is turned slightly to the left, the left cheek recedes in such a way that the ear appears more prominently on that side than on the other.¹

The drapery which covers the back of the head seems not to be a part of the himation, as usually, but a small kerchief or veil. At the front is a narrow band which presses into the hair and is to be explained, not as a fillet, but as one edge of the kerchief, tied tightly about the head. Behind it the cloth is arranged more loosely, and it falls at the sides in simple, vertical folds. Its surface is left slightly rough for the application of color.

The hair is parted above the middle of the forehead and drawn to the sides in thick masses covering the tips of the ears. Its sur-

¹ Similar inequalities, usually very slight, are often observable on heads carved in the round, e.g., the Bartlett head of Aphrodite in Boston, *Antike Denkmäler*, II, pl. 60. The Scopae head from the south slope of the Acropolis, Athens, National Museum, No. 182, shows a more pronounced asymmetry, which is due to the twisted pose. In many heads from Attic grave monuments of the fourth century which were designed for three-quarter view, this peculiarity occurs in even more exaggerated form; e.g., the head from Eretria in Berlin (No. 743; *Sammlung Sabouroff*, pls. XII–XIV), the head of a woman in Boston (*Münchener Jahrbuch für bildende Kunst*, 1911, p. 184, fig. 5; Hekler, *Greek and Roman Portraits*, pl. 49b), and the head of a youth in Boston (Butler, *The Story of Athens*, p. 345; Warrack, *Greek Sculpture*, pl. 43).

face is also left rough, the details being indicated by lightly chiselled, irregular, wavy lines with deeper depressions at intervals, dividing the mass on each side into five or six strands. A close parallel for this sketchy, impressionistic rendering of the hair is afforded by the head of Aphrodite in Boston, of which Mr. Marshall has justly claimed that there is "no better example extant of the Praxitelean manner of treating the long, dressed hair of a woman."¹ On both heads, as on the Hermes at Olympia, the rough texture of the hair is in marked contrast to the surface of the face, which is carefully finished with a slight polish.

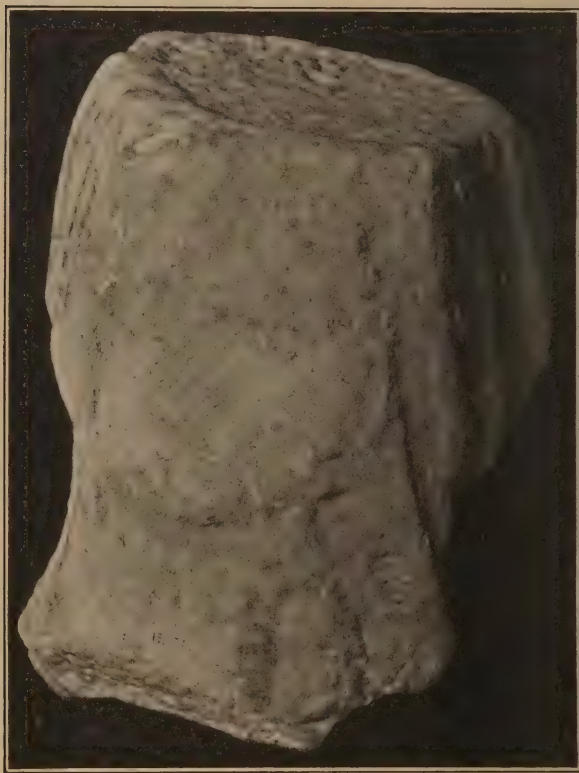


FIGURE 1.—MARBLE HEAD OF A GODDESS; BACK VIEW

In two other respects—the structure of the forehead and the carving of the eyes—the head shows a strong resemblance to a second work, also in Boston, which has a close connection with Praxiteles. The forehead is broad, low, and of the triangular shape usual in the fourth century. Its distinguishing feature, however, is its great prominence in the centre—at the root of the nose and immediately above. If a horizontal section were taken through

¹ *Antike Denkmäler*, Text to plate 60.

the head just above the level of the brows, the outline of the forehead would be seen to form a very pronounced curve, flattened out somewhat above the eyes, but becoming more pronounced at its apex. This is a daring departure from nature, which might almost be described as a deformity, were it not that it adds so greatly to the force and ideal beauty of the countenance. In Figure 2 this curve (A) is represented together with the corresponding outlines of five other heads of the fourth century. The forehead of the head from Chios (E) has almost identically the same curve. In the Leconfield head (C) the central protuberance is less pronounced. The forehead of the Kaufmann replica of the Cnidian Aphrodite (F) swells out as strongly, but the

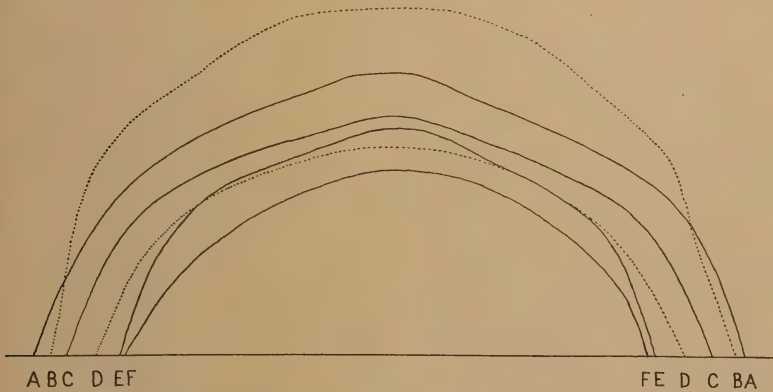


FIGURE 2.—OUTLINES OF FOREHEADS OF FIVE HEADS OF THE FOURTH CENTURY

curve is more regular. A comparison with the Demeter of Cnidus (D), in which the curve is very much flattened in the central portion, brings out clearly the relationship of the other four heads in the formation of the forehead. In their discussions of the head from Chios, M. Rodin and Mr. Marshall have praised especially its force, explaining it as due to the simple, geometrical scheme which "underlies the modelling as the bones underly the flesh" and which "can permit much subtlety of modelling without any danger of resulting weakness."¹ These remarks apply equally well to the work under discussion. But if any one detail were to be singled out which contributes more than the rest to this quality of force in both heads, it is the unusual prominence

¹ Marshall, *Jb. Arch. I.* XXIV, 1909, p. 76, who quotes also Rodin, *Le Musée*, 1904, p. 298.

of the central portion of the brow. The forehead of the Hermes (B) has a much more complicated structure; but here also it is the pronounced swelling of the central portion which, though quite differently formed, gives the force needed to offset the soft, almost effeminate character of the lower part of the face.

A second striking point of resemblance to the Chios head is afforded by the rendering of the eyes. In both heads, as well as in the Hermes of Praxiteles, the forehead recedes rapidly to the sides, and, as a result, the inner angles of the eyes are deeply set, but the greater portions of them are not sunk deeply, nor overshadowed strongly by the brows. The opening is long and narrow; the upper lid droops, and the lower lid is very slightly accentuated. Towards the outer corner it is raised hardly at all from the eyeball, and both lids meet the eyeball in delicate curves, not with sharp edges as in all Greek works before Praxiteles, and in every Graeco-Roman copy of a Greek statue. There are some differences: in the colossal head the eyes are larger proportionally, the length of the eyeball being equal to the distance between the inner corners of the eyes, whereas in the Chian, Leconfield, and Hermes heads it is smaller; the eyes are more deeply set, especially the inner corners; and the upper lids droop further, so that the gaze is directed downward. But the expression is the same, and it is attained by the same means. In the head from Chios this "evanescent treatment" is carried farther, perhaps, than in any other example. It has been convincingly explained by Mr. Marshall as that quality of the works of Praxiteles which ancient critics described by the terms *υγρότης*, *τῶν ὀφθαλμῶν τὸ υγρὸν ἅμα τῷ φαιδρῷ καὶ κεχαρισμένῳ*—"an expression 'soft, radiant and pleasant.'"¹

In the lower half of the face the resemblance to the Chian head is less marked, though the parts about the mouth show the same subtle modelling, and the slightly parted lips were soft and full. The contour is a long oval, slightly narrower than in the heads selected for comparison, but diminishing less rapidly towards the base. This greater heaviness of the chin and the fullness of the cheeks give the head a certain maturity and a matronly character which distinguishes it from the Praxitelean Aphrodite types.

¹ Marshall, *Jb. Arch.* I. XXIV, 1909, pp. 87-91, and the note at the end of the article, pp. 92-98.

The neck is large, with the soft folds of flesh about the throat very delicately rendered, but less accentuated than on the Leconfield head, or even on the head from Chios.

The comparisons made in the foregoing description corroborated the first impression that the head is "Praxitelean." It is also unmistakably an original, and, both as regards conception and execution, one of the finest works of the fourth century B.C. that have come down to our time. The question therefore naturally presents itself: exactly what is the relation of the head to Praxiteles? Can it be added tentatively to the works, like the Leconfield Aphrodite, the Eubouleus head, the Aberdeen Hermes, and the head from Chios, which have been ascribed by various critics to the master himself, or is it to be assigned to a member of his school? In my opinion, the second alternative is to be preferred. The difference in the type could be accounted for by the fact that we have knowledge only of his representations of Aphrodite and Artemis; even Furtwängler was unable to identify among the mass of Roman copies any of his statues of matronly goddesses—Demeter, Leto, Hera—which are recorded in the literary sources. But the head bears no such close resemblance to a Praxitelean work as exists between the Leconfield Aphrodite and the Hermes. And the surface has less of the soft, evanescent quality which the Chios head shares with the Hermes. The rendering of the ears and of the drapery is ruder than we have reason to expect in a work of Praxiteles. And, again comparing the Hermes, the transitions between various planes of the face are modelled with less subtlety. Under these circumstances the work is best ascribed to another artist, though with a feeling of wonder that a follower should have been able to approach so near to the spirit as well as the technique of the master. The resemblance in the carving of the eyes to the Chios head and to the Hermes, which is assigned to the later period of Praxiteles, suggests a date after the middle of the fourth century.

In the absence of a more definite attribute than the veil it is impossible to identify the goddess represented. Three names have already been suggested above, and the list could be increased. Among these, however, the name Demeter seems the most appropriate. If it be accepted, an interesting comparison immediately suggests itself with the best known fourth century representation of the goddess—the Demeter of Cnidus in the

British Museum. This work has been assigned by some critics to the school of Praxiteles, while others with better insight have connected it with Scopas.¹ The conception of the sorrowing Demeter, mourning the loss of her daughter, would have appealed more to the temperament of the latter artist. The intense gaze of the widely opened eyes, set deeply under the high, flat forehead, the wasted cheeks and the pathetically curled lips give the head a strongly emotional quality such as cannot be paralleled among the works of the sculptor of the Satyr and the Hermes. Praxiteles, we may imagine, would have avoided this aspect of the myth, and have rather chosen to represent the Eleusinian goddess as the dispenser of the fruits of the earth to mortals, majestic, radiant with life and health, with a gentle gaze and smiling lips. In other words he would have portrayed Demeter as she is portrayed in the head in Boston.

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¹ Cf. Klein, *Praxiteles*, p. 370, who calls it Praxitelean; Gardner, *Six Greek Sculptors*, p. 192, who finds it full of the spirit of Scopas, "and made by one of his contemporaries and associates, if not by himself." Reinach, *Recueil de têtes antiques*, p. 142, recognizes in it the influence of both sculptors.

A REMINISCENCE OF A SATYR PLAY

AMONG the Etruscan antiquities in the Museum of the University of Pennsylvania is a small circular bronze mirror, 14.9 cm. in diameter, with a fine blue patina (Fig. 1). On the back, engraved in the usual fashion, are three figures. In the middle stands Heracles nude, except for the lion's skin which is tied around his neck and falls down behind his back. His right foot is advanced, and his left drawn back with the toes resting on the ground. He is leaning on his club, which he grasps with his right hand; and in his left hand, which rests at his side, he holds an object only partly visible behind the edge of the lion's

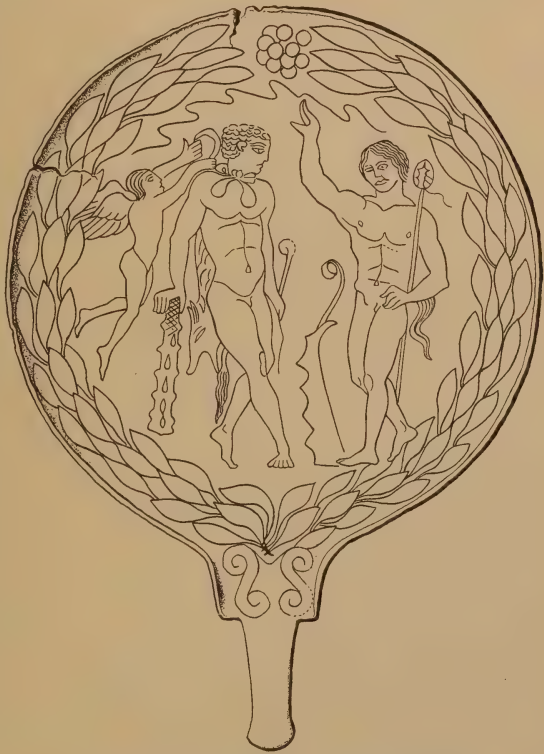


FIGURE 1.—MIRROR IN PHILADELPHIA

skin. It ends in a round knob and is apparently intended for his bow, since upon other Etruscan mirrors and upon Greek vases the ends of the bow of Heracles are often so represented.¹ Behind

¹ E. g., Gerhard, *Auserlesene Griech. Vasenbilder*, I, pl. 36; *Mon. Antichi*, X, pl. 28.

Heracles is a small winged Eros, also nude, who is about to place a fillet or wreath upon the hero's head.

In front of Heracles and facing him is a youthful satyr standing with his weight supported by his left leg, while his right is drawn back so that only the toes touch the ground. His right hand is raised in theatrical fashion, as if he were addressing Heracles or remonstrating with him, and his left rests upon his hip. The position of the right hand with the thumb separated from the fingers is noteworthy. Between his left wrist and his body and leaning against his shoulder is a thyrsus, the end of which rests on the ground. His tail is visible below his left arm. Anatomical

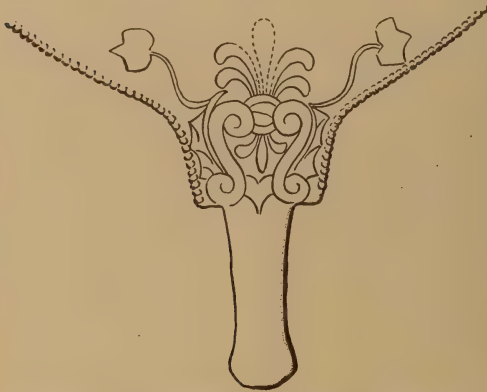


FIGURE 2.—ORNAMENT AT BASE OF HANDLE
OF MIRROR

details are indicated on the bodies of both figures. Between Heracles and the satyr is a peculiarly shaped, pointed object which I think the artist intended for the stern of a boat. So far, however, I have failed to find an exact parallel, although boats with curved stern pieces are common.

Above the heads of the figures is a wavy

line separating this scene from the border which surrounds it. The latter is in the form of a wreath consisting of a triple band of olive leaves which begin at the handle and run to the right and the left, and where the two ends would meet there is a bunch of eleven ivy berries. Below the wreath, at the base of the handle, are two spirals. The lower part of the mirror ends in a tang which was originally fitted into a handle of some other material such as ivory, wood, or leather. On the other side, at the base of the handle, is a somewhat complicated ornament (Fig. 2) consisting of two spirals, a double palmette with five leaves above and three below, and ivy tendrils, while a bead moulding runs all around the outer edge of the mirror. There is a slight break at the top, and a crack at the left side near the Eros, but otherwise the mirror is well preserved.

At first sight there seems to be nothing remarkable about this mirror. The figures are ugly, the drawing is poor, and one would naturally class it with other carelessly drawn mirrors of the third or second century B.C., but a little consideration shows that it is of greater interest than at first appears. Heracles is a common figure on Etruscan mirrors, and the same is true of satyrs, but not Heracles at the same time with a satyr. On Greek vases there are a few examples, or, to be more specific, five which Otto Jahn discussed many years ago,¹ and a very few others. On these vases the satyrs are shown either stealing the arms of the sleeping Heracles, or being pursued by him for so doing; and Jahn showed that the painters had in mind scenes from the satyr drama which regularly followed the tragic trilogy. The adventures of Heracles furnished the tragic poets with an abundance of capital situations for their satyr dramas, and that they made the most of them is apparent from the literature.² For example, we hear of a satyr play by Sophocles entitled 'Ηρακλῆς ἐπὶ Ταϊνάρῳ; of one by Astydamos called *Heracles*; and Heracles was undoubtedly one of the characters in three of the satyr plays of Euripides, the *Eurystheus*, the *Busiris*, and the *Syleus*; and very likely also in the *Omphale* of Achaëus. The list of satyr plays of which the titles have come down to modern times is not large, and Heracles can thus be shown with considerable probability to have had a part in no less than six of them. The presence of Heracles with the satyr, therefore, on this mirror is presumptive evidence that we have before us a scene from a satyr play in which Heracles had a part. The small winged Eros was, of course, not a character in the play, but was added by the artist to complete his picture. On a Greek vase a flute-player might well have taken his place. Such winged Erotes, it is hardly necessary to say, are very common on Etruscan mirrors.

But there is further evidence than that found in the subject to connect this scene with the satyr drama. There is in Athens a red-figured *deinos*, unfortunately partly broken, which once had in a band running round it nine figures engaged in performing a satyr play.³ There were two youths, a bearded flute-player,

¹ *Philologus*, XXVII, 1868, pp. 1-27. See also Heydemann, *Berl. Winckelmanns-Prog.* 30, 1870, pp. 8, 9. For another scene see Benndorf, *Griech. und Sicil. Vasenbilder*, pl. 44, and Baumeister, *Denkmäler*, p. 790, fig. 848.

² See Haigh, *Tragic Drama of the Greeks*, p. 393 f.

³ No. 1055 and pl. XVII in Nicole's *Catalogue des vases peints du musée national d'Athènes, Supplément*; also *Ath. Mitt.* XXXVI, 1911, pp. 269-277, pls. XIII and XIV.

and six actors costumed as satyrs (Fig. 3). It will be noticed that the position of the arms is almost identical with that of the satyr's arms on the mirror. That is, the right hand is raised and extended with the thumb separated from the fingers, while the left hand rests on the left hip. So, too, on the well-known crater of Pronomus in Naples,¹ which has upon it scenes of preparation



FIGURE 3.—DEINOS IN ATHENS

for a satyr play, one of the satyrs has the same attitude. Again the same position is to be seen in a satyr on the crater from Altamura in the British Museum;² and likewise on a crater at Deepdene.³ In fact this seems to have been a characteristic pose for the satyr of the satyr play as he danced up to some other character, and it is, therefore, a further proof that the scene on the mir-

¹ Baumeister, *Denkmäler*, pl. V. For the literature see *Ath. Mitt.* XXXVI, 1911, p. 271, note.

² A. B. Cook, *Zeus*, Vol. I, pl. XXXVIII.

³ *Ibid.*, pl. XXXIX.

ror goes back to such a source. I might add that the gesture with the right hand is also shown on a relief in Rome believed by Schreiber to represent a satyr play;¹ and perhaps also on two other similar reliefs.

Whether we are justified in going further and attempting to identify the play may, perhaps, be questioned, but there are certain possibilities which deserve to be considered. If the object between Heracles and the satyr is really meant for the stern of a boat, as I suppose it to be, it can hardly be intended for any other than the boat which was to convey Heracles across the Styx on the occasion of his journey to the lower world. That being the case, one thinks naturally of the *Heracles at Taenarum* of Sophocles, which dealt with that part of the hero's career. The possibilities for fun in depicting this expedition are easy to appreciate, even without the experience of Dionysus in the *Frogs* to help us; and in the light of the newly found *Ichneutae* the choice of such a subject by Sophocles does not seem surprising. But the few scanty fragments of the play which have come down to modern times do not permit us to go further than to suggest that the engraver of the mirror may have been directly or indirectly indebted to it for his subject.

Scenes from the Greek satyr plays are not numerous on the monuments. More of them appear on the vases than elsewhere; a few are found on sculptured reliefs;² and there are a very few scenes on Etruscan mirrors which may go back to the same source. The Philadelphia mirror, therefore, assumes an added importance. It is interesting also from the point of view of the date. In Greece the popularity of the satyr drama began to decline as early as the fourth century B.C.; but inscriptions found in many places prove that in certain localities it continued to be played as late as the first century A.D.³ In Italy the native farces such as the *Atellanae* seem largely to have taken its place. If we could be sure that the engraver of the mirror took his design from some performance which he had actually seen, we should have evidence that the satyr drama lingered on in Italy in spite of its local rivals as late as the third, or perhaps second, century B.C.; and al-

¹ *Abh. Sächs. Gesell.* XXVII, 1909, No. 22, pl. III. Cf. also pls. I and II, and fig. 3, p. 766. In this connection one may well ask whether the attitude of the Marsyas of Myron's famous group was not directly inspired by the satyr drama.

² See Schreiber, *op. cit.* pp. 761 ff.

³ Haigh, *op. cit.* p. 394, note 4.

though that is not improbable, the possibility always remains that he may have been copying from some pattern book or other source of earlier date.¹ In this respect, therefore, no definite conclusion can be reached; but it would seem that a connection between the design and the satyr drama was sufficiently established by the evidence.

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¹ If Heracles and a satyr were one of the stock subjects of the engravers of mirrors more examples would undoubtedly have been preserved. Pattern books must have been very nearly contemporary with the artists who used them, and an early motive would hardly survive unless it were popular.

NEW REPRESENTATIONS OF CHARIOTS ON ATTIC GEOMETRIC VASES

THE publication in this JOURNAL by Miss Gisela M. A. Richter¹ of two colossal Dipylon amphorae lately acquired by the Metropolitan Museum of Art in New York gives me a favorable opportunity to sum up the particulars in which chariot representations on vases of this and other geometric classes published since the year 1909, when my dissertation on the earliest Greek chariot types was written,² have enriched our knowledge of the chariot during the geometric period in Attica and to correct some errors committed by other writers who have treated of these vases.

In chapter II of my above mentioned monograph I have distinguished two types represented on monuments of the geometric period. The first, called by me the "Egyptian" type from its affinity with the genuine Egyptian chariots known from wall reliefs and from originals preserved by the dry climate of Egypt,³ and represented by chariot models of clay or bronze, vase paintings, and a fibula with incised drawing, seems to be a survival from the Mycenaean period, when similar chariots consisting of a framework rising from a floor curved in front, and furnished with a long fastening which connects the end of the pole with the top of the front, appear on gems and probably also on terra-cotta models.⁴ A good example of this type with open framework is

¹ A.J.A. Second Series, XIX, 1915, p. 385 ff., pls. XVII-XXIII.

² E. v. Mercklin, *Der Rennwagen in Griechenland, I. Teil*. Inaugural-Dissertation, Leipzig, 1909. This monograph is quoted in the following with the letter M. and the number of page or monument.

³ For the Egyptian chariots cf. O. Nuoffer, *Der Rennwagen im Altertum, I. Teil*. Inaugural-Dissertation, Leipzig, 1904, pp. 10 ff. The well-known original chariot in the Archaeological Museum in Florence (Nuoffer *op. cit.* pl. I, 1, Studniczka, *Jb. Arch. I.* XXII, 1907, p. 147, Breasted, *History of Egypt*, fig. 105, Milani, *Il R. Museo Archeologico di Firenze*, p. 125 and pl. XVI) shows the most striking analogies to the chariots in question.

⁴ For the gems see M. p. 11 f., Nos. 6-8; the sard from Vaphio published 'Eph. 'Aρχ. 1889, pl. 10, 30, seems to show a chariot with open framework. For the terra-cotta models see M. pp. 12 ff., pl. I, No. 9.

given by a little bronze chariot found at Olympia.¹ More frequently occurs the second type, which I have called Helladic, for it is the direct forerunner of the archaic chariot on the Greek mainland. This type, like the other, is represented by some terra-cotta and bronze models and by a long series of vase paintings. The floor of the chariot is here not curved at the front, but

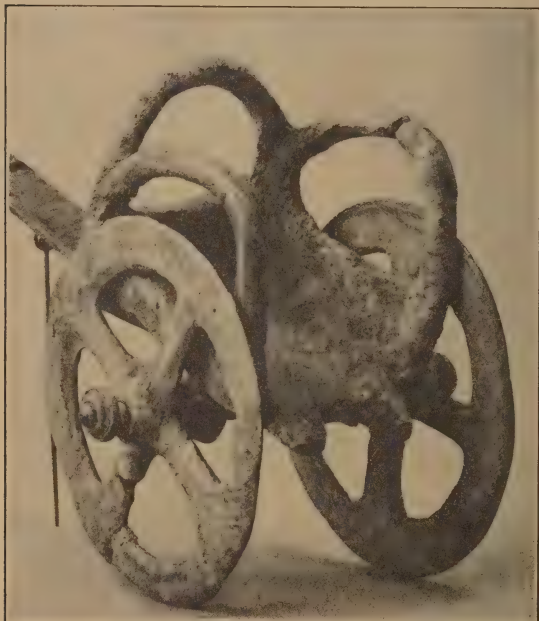


FIGURE 1.—BRONZE MODEL OF CHARIOT; BERLIN
(Scale about 1:1)

is rectangular; the body, open at the back, is surrounded at the front and on two sides by a framework consisting of three arched wooden pieces, closed in their lower half with wood, leather, or basket-work, open in the upper part, as is clearly shown by a bronze model in the Berlin Antiquarium (Fig 1).² In some instances there are vertical supports connecting

the arched rail with the closed part of the body, as we can see in a terra-cotta chariot in the British Museum (Fig. 2).³

¹ M. p. 32, No. 38 and pl. I; *Olympia, Die Ergebnisse*, IV, pl. 15, No. 253. Another bronze model, also found at Olympia and mentioned by me as No. 41, has since been published by F. Weege in *Ath. Mitt.* XXXVI, 1911, pl. VI, 7 and p. 187.

² M. p. 43, No. 51. H. (including the rails) 0.068 m., Diameter of the wheel 0.054 m. The body is 0.032 m. broad and 0.04 m. long. It is not known where this model was found; its provenience from the former Koller collection seems, however, to indicate that it comes from Southern Italy or Sicily. The pole did not belong originally to the model; cf. the detailed description of this monument, M. p. 46 f.

³ M. p. 43, No. 50. Diameter of the wheel about 0.16 m. The body is about 0.075 m. broad and 0.05–0.06 m. long. Provenience unknown.

It is to this second or Helladic type that all the chariots belong which are represented on the vases which I shall examine briefly in this paper. As I have pointed out in my dissertation, among the vase paintings relating to this type we must distinguish two groups, according to the kind of perspective used by the vase painters. The more developed in this respect are the representations where the chariot appears seen exactly from the side, as

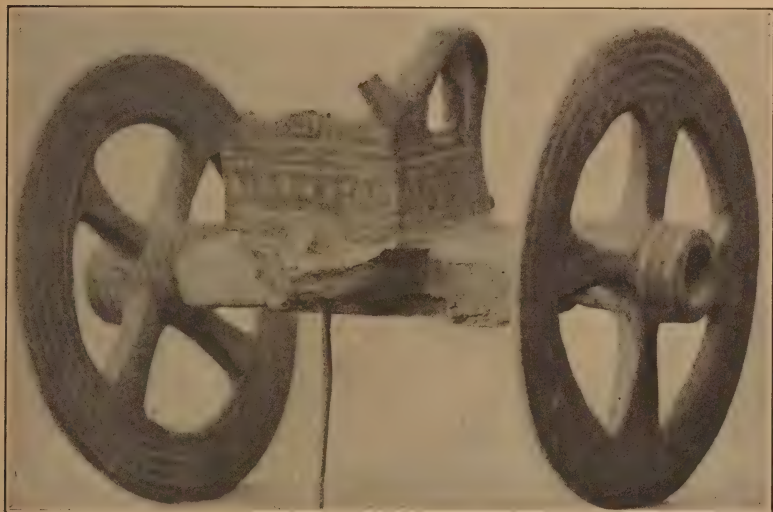


FIGURE 2.—TERRA-COTTA MODEL OF CHARIOT; BRITISH MUSEUM (Scale about 4:10)

then becomes usual in the archaic period.¹ On the geometric vases this final result is actually reached quite seldom,² but it is possible to observe in all its phases the development which leads to it. In the other group the painter gives the individual pieces of which the chariot consists all disconnected in their most characteristic aspects.

The monuments published since the year 1909 to my knowledge are the following:

¹ See *e.g.* the krater of Klitias and Ergotimos in Florence: Furtwängler und Reichhold, *Griech. Vasenmalerei* I, pls. 1-2 and 11-12. Birch-Walters, *History of Ancient Pottery*, I, pl. XXVIII.

² As illustrating the final stage I know only the amphora from Eleusis, *Jb. Arch. I.* XIV, 1899, p. 194, 57. = M. No. 53.

I GROUP (Cf. M. pp. 50 ff.)

- a. Amphora in New York. *B. Metr. Mus.* VI, 1911, p. 33, fig. 6; cf. p. 32 (G. M. A. R[ichter]).
- b. Amphora in New York, *op. cit.* fig. 7.
- c. A fragment from the shoulder of a great vase found on the Acropolis at Athens. B. Graef, *Die antiken Vasen von der Akropolis zu Athen*, p. 29, No. 293, pl. 10.
- d. Fragments found on the Acropolis, probably from a great amphora. Graef, *op. cit.* p. 34 f., No. 345, pls. 11, 12.
- e. Fragments of a "Phaleron" amphora found at Old Phaleron. 'Εφ. 'Αρχ. 1911, p. 249 f., figs. 11-13 (Kuruniotis).

On *c* the chariot is not preserved.

II GROUP (Cf. M. pp. 56 ff.)

- f. Dipylon amphora in New York, from Attica. A.J.A. Second Series, XIX, 1915, pls. XVII-XX and XXIII, 1, pp. 386 ff. (G. M. A. Richter). See also *B. Metr. Mus.* X, 1915, p. 70, fig. 2.
- g. Dipylon amphora in New York, from Attica. *Op. cit.* pls. XXI, XXII and XXIII, 2, 3, pp. 394 ff.; *B. Metr. Mus.* X, 1915, p. 70, fig. 1.
- h. A fragment from the Dipylon, in Paris, Louvre A 552. Morin-Jean, *Le dessin des animaux en Grèce d'après les vases peints*, p. 15, fig. 2, left.
- i. Another Dipylon fragment, Louvre A 553. Morin-Jean, *op. cit.* p. 15, fig. 2, right.
- k. A fragment from Athens, in the Bosnisch-herzegowinisches Landesmuseum at Serajevo. *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, XII, 1912, p. 268, No. 48 (37), fig. 23 (E. Bulanda).
- l. A fragment found at Old Phaleron. 'Εφ. 'Αρχ. 1911, p. 251, fig. 19 (Kuruniotis).

On *i* and *l* the chariot is missing.

It is impossible to assign with certainty to either of the above two groups

- m. A terra-cotta fragment, probably part of a box, found on the Acropolis at Athens and showing only two horses and remains of the figure of the driver. Graef, *Die antiken Vasen von der Akropolis*, p. 27, No. 279, pl. 9.

There is no difficulty in recognizing in the vase paintings of the first group (*a-e*) the chariot type shown by the models published in Figures 1 and 2. According to the perspective used in this group (see above) one wheel alone is indicated. In order to avoid confusion the painter raises the body of the chariot above the wheel. Moreover, the driver is placed entirely on the upper border of the closed part of the chariot and appears to be standing on it, while in reality he is standing on the floor. On *a* the short horizontal projection at the back of the chariot ending in a little vertical bar recalls the analogous projections of the models.¹

The curved front and side rails of the framework are drawn separately on *a*, where they assume the form of loops; the front rail is represented before the driver, the side rails (or more precisely the only side rail visible in the strictly profile view) appear behind him. That this distortion is simply the result of a striving for clearness and does not correspond to the reality, is shown by *b* and *e*, where the connexion of side and front rails is given quite correctly. On *e* we have moreover the vertical support which divides the front rail in its middle, as it originally was in the terra-cotta chariot (Fig. 2), where it is now broken away. On *b* both side rails are visible because arranged in a concentric manner, a peculiarity known also from some other geometric monuments.²

It seems to me impossible to explain the representations on *a* and in the lower frieze on *g* as "one-horse chariots,"³ because I

¹ Beside the models published here such projections occur also on geometric models of the "Egyptian" type and on the genuine Egyptian chariots (see M. p. 36). For other instances on vase paintings see M. p. 54.

² M. p. 54, No. 67 (amphora from Hymettus, *Jb. Arch. I.* II, 1887, pl. 5) and No. 76 (amphora of Boeotian geometric style, in Munich, published now in Sieveking u. Hackl, *Die kgl. Vasensammlung zu München*, I, p. 35, No. 400, pl. 14).

³ Richter on *a* and on *g*, p. 395; here it appears to me that not only the chariots in the lower row, but also the second chariot from the right in the middle frieze on pl. XXIII, 2 (*A. J. A.* 1915) is represented as apparently a "single-horse chariot." In speaking of the number of the horses on Dipylon vases Miss Richter (on *f*, p. 389, note 9) has not referred to the quadrigae represented on the latest geometric vases (M. No. 65, *Arch. Ztg.* 1885, p. 139 and Reichel, *Homerische Waffen*², p. 124, 66, and M. No. 66, *Ath. Mitt.* XVII, 1892, pl. 10; cf. also M. p. 65) and known also from several models (*e.g.* M. No. 49 and pl. 3, 'Εφ. 'Αρχ. 1896, pl. 3). There are also teams of four horses plastically represented and serving as handles on the covers of Dipylon pyxides; to the examples *a* and *b* given by me, p. 48, note 3, we can add some new monuments:

cannot admit that such were in general use among the ancients;¹ as I have pointed out in my dissertation (p. 64), we have rather to recognize here the same perspective as is used in the representation of one wheel instead of two; moreover on *a* are given two reins instead of four. These pseudo one-horse chariots ("Scheineinspanner") occur also on Egyptian, late Assyrian, Phoenician, Cyprian, Mycenaean and Italic monuments.² One may quote also Furtwängler's observation concerning a similar geometric chariot representation on an amphora in the Berlin Antiquarium: "es ist nur ein Pferd angegeben, doch müssen wenigstens zwei gedacht sein, da die Deichsel darauf weist."³ On *b* and *e* the existence of a pair of horses is certain. On *d*, I think, were represented trigae, as we can conclude from the three tails (fragment G in Graef's enumeration) and the three pairs of reins (fragments G and H). The style of the horses' manes (fragment F) and the group of short lines hanging from the fastening between the end of the pole and the front of the chariot (fragment H) connect these fragments with the Munich Phaleron krater,⁴ but they appear, as has been already observed by Graef, to be earlier than the developed Phaleron vases. On

(c) Helbing, *sale catalogue "Griechische Ausgrabungen,"* 27-28, June, 1910, No. 26, pl. I; (d) Hanover, Kestner Museum, *Prachistorische Zeitschrift*, I, 1909, pl. XIII, 1; (e) Copenhagen, National Museum, Case 54, *Führer durch die Antikensammlung*, p. 94, 35; (f) Cologne, Niessen collection, *Sammlung Niessen, Köln, Beschreibung . . . III. Bearbeitung* 1911, No. 3116, pl. CVII; (g, h, i) three pyxides were in 1910 in the possession of an Athenian dealer and came probably from the cemetery to the south of the Acropolis; on one of them were preserved only three horses. From the same source came a pyxis with two horses; for other examples of this type see M. p. 48, note 1.

¹ An exception are the monuments in which children stand on carts drawn by one animal, e.g. Winter, *Typen der figürlichen Terrakotten*, H, 304, 6. Other references M. p. 11, note 1.

² Egyptian and late Assyrian: Nuoffer, *Der Rennwagen im Altertum*, pp. 23, 50, 70; Phoenician and Cyprian: Studniczka, *Jb. Arch. I. XXII*, 1907, pp. 177, 184; Mycenaean: M. p. 26; Italic: Nachod, *Der Rennwagen bei den Italiern und ihren Nachbarvölkern*, Diss. Leipzig, 1909, p. 21: situlae Nos. 4, 7, 9; of the stelae referred to only No. 10 represents apparently a "single-horse chariot"; it is now published also in *Rend. Acc. Lincei*, 1910, pl. II, with discussion on pp. 264 ff., see especially p. 269 f., and *Mon. Ant. XX*, p. 585, fig. 46 (Ducati). Cf. also Grenier's article "triga" in Daremberg et Saglio, *Dictionnaire*, V, 465.

³ *Arch. Anz.* 1892, p. 100, 4; M. No. 62.

⁴ M. No. 69, published also in *Arch. Anz.* 1910, p. 55, 4. The lines are a survival of pennants used as decoration on Oriental and Mycenaean chariots: M. pp. 5, 12, 25, 56. Cf. e.g. *Brit. Mus. Catalogue of vases*, I, 2, C 352.

the fragment L there seem to be preserved not only the remains of a wheel, but also the curved back of the side frame of the chariot. It remains impossible, however, to explain the three lines, two of which intersect, in the extreme right upper corner of this fragment. The bird sitting on the reins behind the horse's head (fragment F) recalls the owls sitting on the pole fastening on a Corinthian aryballus at Breslau¹ and on a Corinthian pinax in the Louvre² and the birds on the end of the pole on a great Melian amphora in Athens,³ on a Melian fragment in Berlin,⁴ on a relief from the "Sicyonian" treasury at Delphi,⁵ and also the cocks on terra-cotta votive pinakes from Locri Epizephyrri.⁶ Our example is, so far as I know, the earliest hitherto published.⁷ On fragment J, where remains of a wheel have been observed by Graef, I propose to recognize the representation of a man who is on the point of mounting the chariot; his body, except one leg and foot, is missing.

In proceeding to illustrate the monuments of the second group (f-l) it is necessary to repeat that these represent the same chariot type as that of the models published here, but in a much more primitive perspective. The two wheels are shown one beside the other. That it is not a four-wheeled chariot, as is still sometimes stated,⁸ is proved not only by the consideration that two-wheeled war- and race-chariots are usual in this—and we can say

¹ *Mon. d. Inst.* III, pl. XLVI 2; Rossbach, *Griechische Antiken des archäologischen Museums in Breslau*, p. 5.

² *Monum. grecs*, 1882-84, p. 27, fig. 5.

³ Collignon et Couve, *Catalogue*, No. 475. Conze, *Melische Thongefässe*, pl. IV; Buschor, *Griech. Vasenmalerei*², p. 73, fig. 53.

⁴ *Arch. Ztg.* 1854, pl. 62, 3 and Conze, *op. cit.* vignette before the text.

⁵ *Fouilles de Delphes*, IV, pl. VII/VIII, 2. Perrot et Chipiez, *Histoire de l'art*, VIII, p. 367, fig. 163.

⁶ *Not. Scav.* 1884, pl. I, 3 and p. 251 f., *Boll. d'Arte*, III, 1909, p. 465, fig. 32.

⁷ See in general Hörnes, *Urgeschichte der bild. Kunst*, p. 482, note 7. Boehlaue, *Jb. Arch. I.* II, 1887, p. 36. Hauser in Furtwängler und Reichhold, *Griech. Vasenmalerei*, III, p. 6, interprets the owl sitting on the horse's mane on the Corinthian krater with the departure of Amphiaras, in Berlin (*ibid.* pl. 121), as a motive derived from the older representations here in question.

⁸ Morin-Jean, *Dessin des animaux*, p. 15. He gives on p. 16, fig. 3, a chariot from the same Dipylon vase in Paris (Louvre A 517), which I have studied as No. 75 making use of a tracing kindly procured by E. Pottier. Both chariots are almost identical; the forked upper end of the front rail on the chariot there published is surely due to carelessness of the painter and does not correspond to reality, as likewise the lack of the pole fastening, which occurs correctly on the other team.

in all—periods of antiquity,¹ but also by an example of a four-wheeled cart represented on a Dipylon ekphora vase in Athens with all its four wheels depicted side by side.² On the other hand we have a chariot frieze from a Dipylon amphora published by me when in the possession of a dealer,³ where we see the bodies of the chariots represented in the same manner as is usual in this group, but with one wheel only.

Just as the wheels are depicted one alongside the other, so the front piece of the chariot, represented in front view, is placed beside the side piece or upon it. The side rail, which now assumes the form of a horse-shoe, is placed behind and above the closed side piece in order not to interfere with the figure of the driver. It is for this reason that this perspective has been misunderstood first by Helbig,⁴ then by Reichel, who explains the side rail also

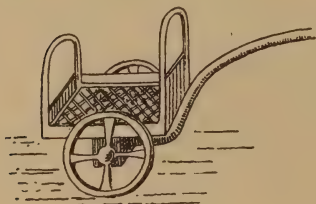


FIGURE 3.—INCORRECT RECONSTRUCTION OF A GEOMETRIC CHARIOT (after Reichel)

as a back piece seen from the front in the same manner as the front piece, and gives a reconstruction of this type in fig. 65 of the second edition of his *Homerische Waffen*, which is here reproduced (Fig. 3). In discussing the two New York amphorae *f* and *g* Miss Richter follows him in speaking also of “front and back-pieces” (pp. 389 and 395).

This incorrect explanation I have already rejected in my dissertation (p. 61): it is in contradiction to every normal and usual ancient chariot type, when we assume that the back of the chariot was closed while the sides remained open and unprotected, in such a manner that the driver was constrained to climb over the wheel in mounting the chariot. On *g* all the chariots have arched front and side rails, on *f* it is only the first chariot on the right, judging from the illustration (*A.J.A.* 1915, pl. XXIII, 1), which corresponds to the description of Miss Richter, that the chariots have “curved front and back (*i.e.* side)

¹ Richter on *f*, p. 389, note 5, with reference to Reichel, *Homerische Waffen*², p. 120 f.

² M. p. 59, note 2; *Ath. Mitt.* XVIII, 1893, p. 101 f.; Collignon et Couve, No. 199; K. F. Müller, *Der Leichenwagen Alexanders des Gr.* p. 14 f.; Bieber, *Verzeichnis der käufl. Photographien des K. Deutschen Archäol. Inst. in Athen*, I, Nos. 2980 and 2981.

³ M. pl. 2, No. 78, and p. 59.

⁴ Helbig, *Homerisches Epos*², p. 139.

pieces," the front pieces of the others terminating above in a horizontal line. This peculiarity occurs also on other Dipylon fragments,¹ as well as the distinction between a vertically or cross hatched side and a solidly painted front piece. The hatching on the side piece is probably to be referred to a piece of basket-work, as is shown on Oriental, Mycenaean, Ionian and Etruscan monuments² and described in the Homeric poems.³ On *g* the bodies of the chariots seem to be shorter than is usual in this group and correspond better to the chariot models; the artist has placed the front and side rails not on the side piece, but alongside of it. The closed part of the chariot is here represented either as a solidly painted surface or decorated with vertical hatchings. The first chariot from the right on pl. XXIII, 3 has an unusually high body. So far as I can see from the publication no pole and no fastening between pole and chariot are indicated by the painter of this vase.

On the fragments *h*, *i*, *k*, *l* no new peculiarity deserves notice, while the chariots on the amphora *g* give for the first time a sure example of the eight-spoked wheel on Attic works of this period. This fact is decisive also for the correct interpretation of another case, where I have only conditionally proposed to recognize the eight-spoked wheel: on an amphora in the Berlin Antiquarium⁴ the artist has painted one wheel within the other and given to it eight spokes. I have supposed that perhaps this could have been also an experiment to show both wheels, each with four spokes, the eight-spoked wheel not being known at all on monuments of the Greek mainland during this period. Now I have no longer any hesitation in adding this example of an eight-spoked wheel to the new one represented by the amphora *g*, while on the other monuments, where chariot wheels are painted one within the other,⁵ these have the regular four spokes.

The painter of the amphora *g* has also made an interesting attempt to show the two men standing on the chariot by drawing them in the perspective called by R. Delbrueck "*seitliche Staffellung*,"⁶ a proceeding which to my knowledge, as applied to the

¹ M. Nos. 72, 74 and the funeral car on a fragment at Bonn, M. p. 60, note 3, *Arch. Anz.* 1890, p. 10 B, II, 2.

² M. p. 61. Nachod, *Der Rennwagen bei den Italikern*, pp. 50, 55, 59.

³ Helbig, *op. cit.* p. 127, note 11, and p. 142; Reichel, *op. cit.* p. 125 f.

⁴ M. No. 62 (see p. 402, note 3), pp. 53, 66.

⁵ M. No. 53, 61, 65.

⁶ R. Delbrueck, *Beiträge zur Kenntnis der Linienperspektive in der griechischen Kunst*, Diss. Bonn, 1899, pp. 1 and 18. See *A.J.A.* 1915, pl. XXIII, 3, fourth

human figure, occurs here for the first time (cf. Richter, p. 395, note 2).

Likewise the series of trigae known before only from two examples on geometric vases¹ and from a few teams of three horses in terra-cotta placed on the covers of Dipylon pyxides² has been increased now by the fragments *d* (see above) and by the chariot procession on the New York amphora *f*. The use of a side horse (παρήγορος) besides the two yoke horses—characteristic especially of the Assyrians beginning with the ninth century B.C., known also to the Eastern Greeks of the Homeric poems and widely diffused by the Etruscans,³—is, therefore, not so rare as it formerly seemed in the late geometric period of Attica.

In conclusion I desire to mention a peculiarity occurring on the fragment *m*, where the end of the pole is connected by a double fastening instead of the usual single one with the front of the chariot, and to call attention to the fact that in no instance is a whip⁴ held by the driver, but always a goad (κέντρον), the former being an Oriental characteristic and the latter belonging to the Greek mainland.⁵

EUGEN V. MERCKLIN.

ROME, MAY, 1916.

and fifth chariot from the left, and also the upper frieze on pl. XXII, where in the middle is a similar group.

¹ Louvre A 541; Pottier, *Vases antiques de Louvre*, I, pl. 20. Perhaps also the Phaleron pyxis in Athens, *Jb. Arch. I.* II, 1887, p. 55, No. 13, figs. 19 and 20, M. No. 68 and p. 65. Grenier in his article "triga" in Daremberg et Saglio agrees with me in the interpretation of this vase.

² M. p. 48, note 2. We must now add the pyxis referred to in the Helbing sale catalogue "*Griechische Ausgrabungen*," 27–28, June, 1910, No. 25 (from Attica). No. b of my note is now reproduced also in Daremberg et Saglio, V, p. 467, fig. 7053.

³ See Grenier's article "triga" in Daremberg et Saglio, *Dictionnaire*, V, 465 ff. Cf. also Helbig, *op. cit.* p. 128 f., Reichel, *op. cit.* p. 141 f., Nuoffer, *op. cit.* pp. 41, 51; Studniczka, *Jb. Arch. I.* XXII, 1907, p. 195; Nachod, *op. cit.* p. 63.

⁴ Richter on *f* and *g*, pp. 389 and 395.

⁵ On the goad see Sorlin Dorigny in Daremberg et Saglio, *Dictionnaire*, IV, 2, p. 1511, s.v. *stimulus*, I. Cf. Nachod, *op. cit.* p. 63.

A NOTE ON THE SO-CALLED HORSE-SHOE ARCHITECTURE OF SPAIN

WE USE the name of horse-shoe arch for two sorts, the circle carried on past the diameter, or *arc outrepassé*, and the true horse-shoe, or *arc en fer à cheval*. Except for the sake of exactitude I shall not have to distinguish particularly between the two forms, for both are about equally infrequent in the mediaeval architecture of England, France, or Italy, except where the Saracens settled; and both were found by M. Dieulafoy in those Persian palaces from which he wishes to derive the larger part of Romanesque building. Both occur in Spain with remarkable frequency. The constant use of this form with pleasure passing into matter-of-course and almost indifference is what I have to illustrate.

There are two Roman steles in the museum at Leon, of the second century, ornamented one with three and the other with one horse-shoe arch, by way of decoration—also others of the sort with the rosette and the catharine-wheel. I saw these at the museum two years ago but neglected to photograph them at the time.¹ There are in existence nine in all from this region, all of the second century and all bearing Latin or indigenous names.

The Visigoths therefore found the horse-shoe arch when they settled down in Spain. They adopted it. The late canon López Ferreiro unearthed, in this connexion, an important definition from the *Etymologies* of S. Isodore: "Arcus dicti quod sint arcta conclusione curvati" (*Etym.* XV, vii). S. Juan de Baños shows it in the doorway, in the nave arcade, and in the little windows; now that church was founded by the Gothic king Recesivintho in 661, and all Spanish authorities are agreed that the characteristic features of the present church sustain this date of the latter seventh century—that it is pre-Romanesque. In Asturias a few instances persist; they are a trifle sporadic and

¹ These were published by P. F. Fita in the *Museo Español de Antigüidades*, Vol. XI, with a magnificent plate.

occur mainly in windows. S. Salvador de Val-de-Dios may be of 893; it is of the same type as S. Juan de Baños with bolder transepts (Fig. 1). S. Miguel de Linio was founded in 848; it has a central lantern, high transepts and a narthex, but the east end is quite altered. I see no reason, however, for supposing the apse or apses would not have been square originally, like those



FIGURE 1.—S. SALVADOR DE VAL-DE-DIOS

of S. Juan and S. Salvador and S. Cristina de Lena. In the last of these the horse-shoe arches again appear in the decoration pierced above the iconostasis. M. Dieulafoy would date it, like S. Miguel, 842–860.¹

On the other side of Spain, at Tarrasa in Catalonia, the horse-shoe arch figures on the plan. The church of S. Miguel, once a baptistery, has a plan like a Greek cross with the corners filled in, a central lantern and projecting apse; and the curve of the apse is a good deal more than half a circle. So

is that of S. Maria, which stands alongside. Now the suburb of Tarrasa where these churches stand is the site of the ancient citadel of Egara and the see of a Visigothic bishop. The capitals of the lantern-columns are like certain of those found in the Asturias and are pre-Romanesque in type. Señor Puig y Cadafalch thinks the apse of S. Maria is Visigothic, though the present church was consecrated by Bishop Raymond of Barcelona in 1112.

¹ 'Monuments Asturiens Proto-Romans,' in *Florilegium Melchior de Vogüe*, pp. 187–196.

Germigny-des-Prés, near S. Benoit-sur-Loire, the ancient abbey of Fleury, supplies one of the rare instances in France of this arch. It was built by the Spanish bishop Theodulf, poet and friend of Charlemagne, in 806.

These seven churches show Spaniards using the form in the seventh and ninth centuries, freely and widely. I ought to add that a doorway into the cloister of S. Juan de la Peña, in Aragon, and the row of arches that divide the crypt down the centre there, are of true horse-shoe shape and belong to the original hermitage built by Sancho Garcés in 842.

Here I want to make explicitly the assumption implied in the reference to the churches at Tarrasa—that when a church was rebuilt, for instance, after it was burned by invaders, the lines of the foundation are likely to be preserved, just as the capitals are likely to be used again.

It is well known to palaeographers and connoisseurs that the miniatures in Spanish manuscripts show the horse-shoe arch, from the *Beatus Apocalypse* of the National Library in Madrid, *e.g.*, the Gate of Paradise and “Babilon”; to the *Bible de Noailles*¹ in Paris. Of the two codices of the Chronicle of Albelda possessed by the Escorial, the *Vigilanus*, finished in Albelda in 976, shows *Vigila* standing, with a scroll, inside a square frame, like “*Sancio Rex*” and other worthies that adorn the page; but the *Emilianus*, finished before 992, sets him down to write under a horse-shoe arch. Now the latter was copied at the abbey of S. Millan, and the venerable sanctuary of S. Millan *de Suso* passes for work of the tenth century. The Homilies of Bede at Gerona, the Bible of S. Pere de Roda and the Gerona codex of *Eude pintrix* and the priest *Emetri*, which is dated 975, all use the horse-shoe motive currently for architecture. On a leaf from one of the so-called Visigothic codices from the abbey of S. Domingo de Silos, now in the British Museum, which cannot be later than the eleventh century, there are, ranged below the figures of the Almighty, the angel, and the prostrate S. John, seven horse-shoe arches sustained by columns, to represent the Seven Churches of Asia. Finally, I have two tracings from miniatures of the later thirteenth century in the *Cantigas del Rey Sabio*, which show, one a city gate and street, all of horse-shoe arches, the other a feast under a pure gothic arcade of the most delicate

¹ Figured in Dieulafoy, *Art in Spain and Portugal*, figs. 158, 159, 241.

cusping. The two forms appear indifferently and interchangeably throughout this MS. and also the Book of Chess, 1286.

I come now to a few instances in Mozarabic architecture, *i.e.*, work done in Christian kingdoms during the Mohammedan

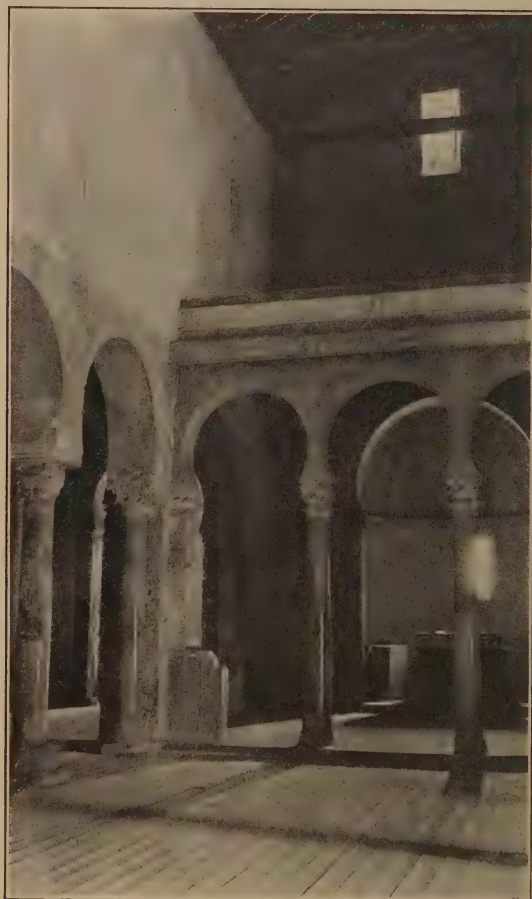


FIGURE 2.—S. MIGUEL DE ESCALADA

domination in Spain. Perhaps the most famous is S. Miguel de Escalada, near Leon (Fig. 2). The arch here continues the curve at each side for 30 degrees beyond the horizontal diameter, forming an arc of 240 degrees. All the building shows the same form—the plan of the apses, the nave arcade, the windows, the arcade of a cloister or porch down the south side. Of the capitals some are in the style I have already referred to as appearing in the Visigothic

strongholds, some are imitated from the antique, and some others from the transennae there in the church; those of the lateral cloister are in another style which recurs through the Vierzo—a western copy of, I suppose, a Byzantine motive. The carvings of the chancel screens are like some at S. Cristina de Lena and like some in Italy that Cattaneo¹ calls Byzantine-bar-

¹ Cattaneo, *Architecture in Italy from the Sixth to the Eleventh Century*, p. 184.

baric and refers to the eighth and ninth centuries. Alfonso III made the donation on November 20, 913, to monks who fled with their abbot after the fall of Cordova. There may have been plenty of building material on the spot, ready for use, but the monks must have brought their Cordovan style of building with them. When, seventy-four years later, Almansor harried the March of Leon, he burned what was combustible, and they rebuilt. The same characteristics reappear in S. Cebrian de Mazote, in some ways a twin church to S. Miguel, and in S. Miguel de Celanova, 958.

This last has been attributed, conjecturally, to the same architect as Santiago de Peñalva—a double-apsed church which is, I think, unique in Spain (Fig. 3). It has two apses and a sanctuary domed with the same curious



FIGURE 3.—SANTIAGO DE PEÑALVA

fluted effect as at S. Miguel de Escalada, transepts barrel-vaulted like the nave but walled off from the sanctuary (suggesting the eastern treatment of lateral apses) and used as sacristies, and a high barrel-vaulted bay into which a lateral vestibule opens by two horse-shoe arches, enclosed under a great one and resting on three marble columns. There were doors once inside this arcade. There is a walled-up door, also with horse-shoe arch, opposite. It was built in 931-937

to provide a shrine for two saints, S. Genadio and S. Urbano. The columns are of local marble, the capitals finer than those of S. Miguel. Señor Moreno would attribute the whole to that Viviano who built S. Pedro de Montes for Genadio in 898. That church shows now nothing earlier than Romanesque of the twelfth century, but a third church in the same region, a quarter

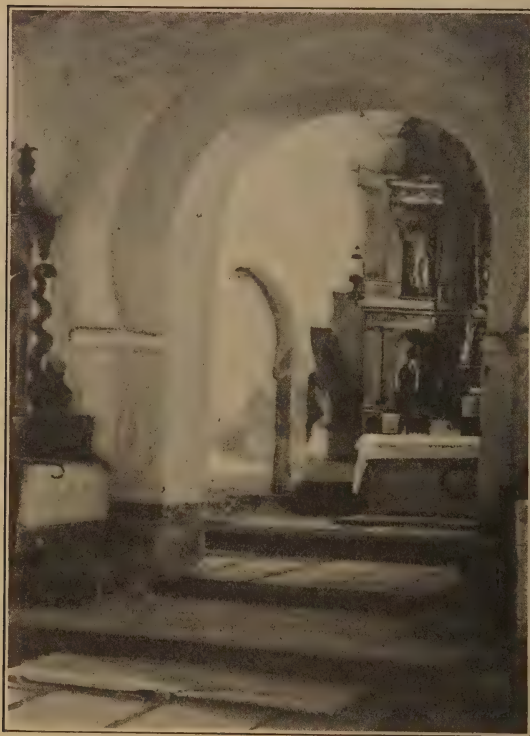


FIGURE 4.—S. TOMÁS DE LAS OLLAS

of an hour out of Ponferrada, is even more curious than that of Peñalva (Fig. 4). S. Tomás de las Ollas is built of granite and shows no carving on capital or doorway, but the curious elliptical sanctuary has the same fluted dome as Peñalva and the semidomes of Escalada, is arcaded around with nine *arcs outrepassés* of Mozarabic form carried on pilasters, and opens by a larger arch of the same form into a common-

place nave of the twelfth or thirteenth century. The church is mentioned in documents as early as this, but it may well be, in the eastern part, contemporary with all the Mozarabic churches of the tenth century. It is a charming off-shoot of a strong stock. Those churches (most of them in Leon but a few in the provinces adjoining—Valladolid, Palencia, Galicia and Santander) are the great might-have-been of Spain. If the kings had not been ultramontane, uxorious, and priest-ridden, *there* should have grown the greatest Spanish style.

Of Moorish work and the Mudejar style that followed the expulsion of the Moors, I have no occasion to speak. They are known well. The abundance of it in the Castiles,—at Toledo, in the brick architecture about Sahagun and above Saragossa,—all the infinite variety of the interlaced and pointed horse-shoe, must have had its effect upon the Christian imagination. Examples are widespread: the cloister of S. Juan del Duero was building for the Templars, in Soria, from the twelfth through the fourteenth century (Fig. 5); the chapels of S. James and S. Saviour were built for the nuns at Las Huelgas



FIGURE 5.—S. JUAN DEL DUERO, SORIA

(Burgos) in the richest style of the fourteenth century. In the full Renaissance, 1536, the sculptor Tudelilla of Tarazona built the cloister of S. Engracia, at Saragossa, with horse-shoe arches above and below; two below, three above, grouped under arches *en anse de panier*.

I have shown, then, that for more than a thousand years the form was used in Spain deliberately, and for more than half that time frequently; it was familiar and agreeable to the eye. Inevitably, in consequence, the same effect where it occurred by accident was not avoided with the sedulous care exhibited by French and English architects. It imposed itself naturally on

the Spanish imagination as a mere agreeable variant among accepted arch forms. I cite, in conclusion, some curious instances of this.

In Romanesque building, where small and high-stilted arches are set well back on the abacus of a capital, the effect as seen from below is ambiguous; hence some have fancied they saw horse-shoe arches in Santiago of Compostela. There are none.¹ There is, however, an ornament on the south face,² of cusping round a window, in which the openings enclose nearly three quarters of a circle, and this ornament with modifications is common all over Spain. It is seen on the window of S. Maria at Cambre, close to Corunna, and on the door of N. S. de Salas, close to Huesca. Figure 6 is a detail, very characteristic,



FIGURE 6.—ORENSE; CATHEDRAL;
DETAIL OF SOUTH PORTAL

from the south portal at Orense; it figures on all the doors of that cathedral. Another Romanesque form, based on the arc almost completed, is the curious ornament that Street sketched in the door of S. Martin, Salamanca, and observed, slightly varied, on the south portal of Zamora cathedral.³

At Leon, where some old work was built into the cloister wall at a fairly early date, the round arch and the true horse-shoe (*arc en fer à cheval*) appear indifferently side by side (Fig. 7). In the good pointed work, of the fourteenth century, at S. Francisco

¹ Cf. also Street, *Gothic Architecture in Spain*, new edition, I, p. 131, note.

² Figured in Dieulafoy, *op. cit.* fig. 194.

³ Street, *op. cit.* I, pp. 112, 116.

of Orense, the arch is tricked out with leafage laid on above the abacus, about the springing of the arch, so as to give a studied



FIGURE 7 —LEON; WALL OF CLOISTER

effect of the horse-shoe in silhouette (Fig. 8). Lastly, in a number of Galician parish churches of the twelfth or thirteenth century



FIGURE 8.—ORENSE; CLOISTER OF S. FRANCISCO

the sanctuary arch is unmistakably *outrépassé*:—I am content to cite S. Andrés de Sarria (a very long way from Sarria station)

and S. Tirso de Manguas, near Bandeira, on the highway that connects Orense with Santiago. In short, like the round arch in transitional building in France, the horse-shoe so persists in Spain that one is left wondering not only why, but how, the rest of Europe avoided what seems so easy and inevitable.

GEORGIANA GODDARD KING.

BRYN MAWR, 1915.

THREE NOTES ON CAPITALS

I

THE church of Santiago de Barbadelo lies about four miles from the railway station of Sarria and at least two miles off the highway. It is, I suppose, inaccessible to carriages, but it lies nobly, with its half-dozen houses, amid grassy pastures and leafy groves, the land dropping away to south and east, so that from that side the tower would draw the eye, as its bells the ear. It is a peculiarly fine example of the Gallegan parish church, larger than most, more rich in sculpture, and very curious in the detail of this. In the twelfth century it lay directly on the Pilgrim Way and figures in the *Itinerary* of Aymery Picaud (ca.1130); Villuga omits it from his *Repertorio* of 1547 and names Sarria; it is possible, therefore, that already in the sixteenth century the road was diverted and the church neglected.

The nave is a rectangle, timber-roofed, with two windows on a side, set high and treated like a clerestory; capitals and mouldings are very rich with billet, chevron, and leaf forms; the apse is vaulted in a semidome and preceded by a bay of barrel vault, sustained east and west by columns with strong carving; and the tower, engaged in the northwest corner of the church and filled with a turning stair, opens to it on both faces with bold round arches, well moulded, that rest on similar columns but loftier and more massive. The capitals of these are carved with fantastic monsters—griffin and wyvern, and one, I should judge, an elephant done from hearsay. *Elefas* was an important figure among the mediaeval fauna of churches (figuring, for instance, with his name on an aisle-capital at Aulnay); here the trunk juts out at an unlikely angle. But the Romanesque carving is strong and skillful and indicates the twelfth century. The western porch, timber-roofed and slated, shelters a round-headed doorway with two attached shafts in the jambs (Fig. 1). The tympanum is sculptured to simulate a rising lintel, like that at S. Faith of Conques and S. Maria del Sar at Compostela, filled with a design

of interlaces and rosettes that centre on a human face brutally simplified, like the gingerbread man's—a mere disc with two round holes for eyes and two straight lines for nose and mouth. In spite of the great inequality of the Romanesque carvers' work, their curious inability to render the human form when the design of animal and plant life is quite perfect, I think this case is not one



FIGURE 1.—SANTIAGO DE BARBADELO; WESTERN DOOR

of incapacity but choice on the artist's part, and I should add that I saw a pair of those same faces, only two days before this, on the confines of Leon, freshly carved on the granite jambs of a new house. Their significance I do not know. Above, in the lunette, a sunk circle between two rosettes holds a human figure with wings instead of arms. The capitals in the jambs are:—the outer left-hand, a pair of cocks; the outer right-hand, S. James and two pilgrims, very crudely wrought; the inner left-hand, a pair of lions; the inner right-hand, a pair of cats. The reader can see in Figure 1, that the lions are the familiar Romanesque beasts, and the cats are deliberately distinguished from them in proportion and feature. This work is all granite and though not unspotted by yellow lichen, very sharp, sheltered by the porch from weather. There can be no question of modern tampering, for since the end, at latest, of the fifteenth century, the application of humour to religion has been discouraged in Spain. On a door in the north flank of the church one capital

shows two lions affronté regardant, and the corresponding capital I can only conjecture to be Manichæan; on each of the two faces are two serpents intertwined, one drinking from a chalice and the other eating of the Fruit of the Tree. The two serpents' heads hang above the cup at the centre of the capital.

I cannot find any reference to the church apart from itineraries; Morales overlooked it and Florez ignored it. There, in the twelfth century, a carver had strange imaginations, probably blasphemous, and a thrill of Satanic rapture.

II

At the convent of Las Huelgas, near Burgos, founded in 1187 by Alfonso VIII and Eleanor his English queen, the principal architecture is Angevine, but in the interior not only the plaster decoration of ceilings and the wooden leaves of doors, but the fabric of whole buildings, is Mudejar, testifying to skilled workmen who were Moorish slaves. It is possible that they brought from the South not only their skill, their designs, and their horse-shoe architecture, but finished work as well, for royal gifts perhaps. The custom was common; as early as the ninth century Alfonso III bought marbles and columns for Santiago from the Moors. The chapel of S. James is purely Arab work, very rich, and the horse-shoe arch that opens to it from the garden rests on a pair of capitals that are almost as fine as the antique. Spanish Byzantine of the sixth or seventh century had forms like this, and the fourteenth century work at Seville,¹ which it most resembles, was based on that (Fig. 2). It is neither Romanesque nor Gothic in the least



FIGURE 2.—LAS HUELGAS;
ENTRANCE TO CHAPEL OF S.
JAMES

¹ Forms very similar occur, at the Alcazar of Seville, in the "Dormitorio de los Reyes" and the "Patio de las Muñecas." Cf. also the Arab-Byzantine capitals at Cordova, photographed by Laurent, No. 872.

degree, its perfection is in no wise European; its affinity is not with Latin art, but with another tradition most plainly to be traced within the kingdom of Leon or in the lands contiguous thereto.

Roman remains do indeed persist, though hardly. The lofty and noble façade of S. Maria la Madre at Orense enshrines eight antique capitals whose history no man knows; but the survival was easy there, for Orense was a Roman thermal station, and the capitals are true Roman. In S. Cebrian de Mazote, a church discovered in 1902, contemporary and closely allied with S. Miguel de Escalada, some of the capitals are plainly of Roman inspiration, and resemble those of the destroyed Church of S. Roman de Hornija.

At Sahagun, in the kingdom of Leon, was the greatest Benedictine monastery in Spain, founded in 905, reformed in 1079 and made by a French prelate into a mere *succursal* of Cluny. In the ruined abbey church by S. Tirso (of the late twelfth and early thirteenth centuries), such capitals as remain are of the familiar transitional form of a ball in a claw, or a bud just cracked out of its casing, if you prefer. There are few capitals anywhere in the town, for it is built like Babel, where "they had brick for stone, and slime had they for mortar." The churches are of the twelfth century and on down to the fourteenth, of a marked regional style. But the town was a halting-place on the Pilgrim Way, and was a great station on the Roman road that went before it, and there stands in S. Lorenzo a pair of capitals made into a holy-water stoup which show in one way a knowledge of some relics of the antique, and in another a connexion with the building that was done elsewhere in Leon in the tenth century. The lineal form that the delicate leaflets take, and their arrangement as individual growths on either side a central form, instead of mere slashes in a solid though crumpled fabric, suggest the East and not the West, suggest a different conception from the Roman acanthus leaf. The base of each capital is bound with a braided twist, and the abacus which was a trapezoidal block at Ravenna and Constantinople, is here moulded in successive stages divided by a fillet. The characteristic beading on this shows well in Figure 3. The same abacus and necking reappear in two, at least, of a group of churches that were built by a single group of men: S. Miguel de Escalada and Santiago de Peñalva in Leon; Villanueva de las Infantas and S. Miguel de Celanova in Galicia south of Orense.

Sahagun was early a frequented shrine. To the *Santos Domnos*, Facundus and Primitivus, kings and bishops gave granges and mills, towns and cornland. Finally it sheltered a handful of Cordovan refugees with their abbot Alfonso.¹ For them Alfonso

the Great bought the little church by the river Cea, on the Roman road called Strata or Calciata. It was built perhaps in 874, destroyed in 883 by Abohalid; "to its foundations" says the Chronicle of Albelda. "Sed per castrum Cojanecam ad Cejani iterum reversi sunt, domumque Sanctorum Facundi et Primitivi usque ad fundamenta diruerunt." In 905 Alfonso promises, in a privilege, that he and his wife Ximena will "restore, enlarge

and dower it." In the tenth century it was rich. Almansor ruined it again: "Domum Sanctorum Facundi et Primitivi subvertit." In the eleventh century it was very rich; Bernard the great archbishop of Toledo was still abbot there when Alfonso VI reformed it (1079), and Gregory VII in 1083 gave it all the prerogatives

¹ "Ambiguum esse non potest," runs a privilege of Ramiro II, "quod plerisque cognitum manet, quoniam dum esset olim illo in loco villa et ecclesia parrochiana motus misericordia avus meus Serenissimus Princeps Adefonsus emisit ea à propriis dominis, et dedit eam sub manus abbati Adefonso, qui cum sociis de Spania advenerant huic regioni habitantes ad construendum ibidem Monasterium sanctimoniale, sicuti est usque, et fecit testamentum."



FIGURE 3.—SAHAGUN; S. LORENZO; HOLY WATER STOUP

and privileges of Cluny in France. But the church was not fit for use until 1213: "translata sunt de veteri ecclesia ad novam V-

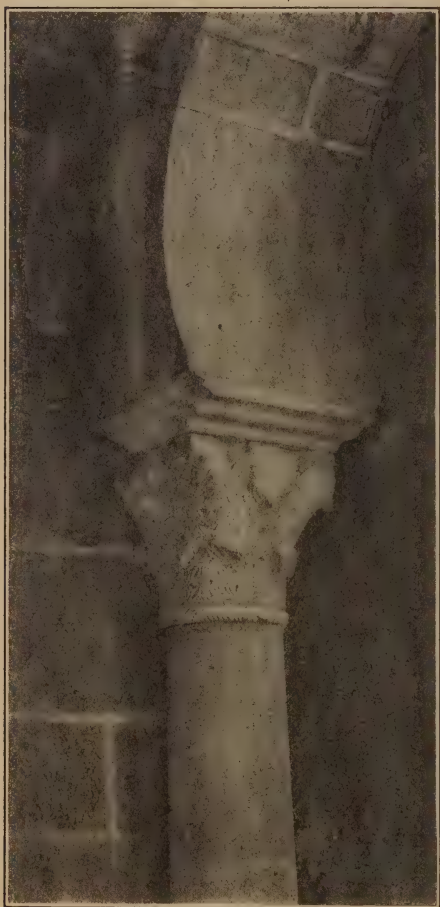


FIGURE 4.—CAPITAL IN CLOISTER OF S. MIGUEL DE ESCALADA

idus Junii¹ era MCCLI, regnante Adefonso Rege Castellae, Abbate Guilhelmo in isto monasterio praesedente." *Sic transit* is the story of Sahagun. Not one complete wall of Abbot William's great church still stands; and of all Abbot Alfonso's, this piece alone survives.

The ancient priory of S. Miguel de Escalada stands on the bank of the Esla, and, P. Fidel Fita says, near a pilgrim route. The Romans had been there, for many of their bricks were built up into the walls, and stones with Visigothic inscriptions as well, when, in a single year, a handful of monks expelled from Cordova with their abbot Alfonso raised the church and consecrated it in 914. It is something more than probable that old work remained, Visigothic

perhaps, and was used again, if the work was done at that rate, and it is also possible that the great cloister down the south side was not included in that consecration by Bishop Genadio of Astorga, but should rather be referred to a tablet built into the door of it, dated 1050, and inscribed with the names of royalty,

¹ It should be January, says Florez.

Ferdinand and Sancha, Ciprian, Bishop of Leon, and the abbot Sabarico. The occasion of that rebuilding or enlargement is unknown. "25 November, 988. Campaign of Almansor this year, how he destroyed the city of Leon, and the monasteries that were in his path:"—so the ancient chronicle. But that date is too early, and in 1002 Almansor died and the land had peace a while. Certainly the interior contains no capitals like these thirteen of the cloister; all alike; and while the fabric itself, with its horse-shoe arches both structural and on plan, is universally admitted to derive from Cordova, the capital here (Fig. 4) looks like a development, in fanciful and dexterous hands, of the motive found at Sahagun, and supplies an intermediate form between that and the bold and noble capitals at Santiago de Peñalva (Fig. 5).

That lonely hermitage was built about 937, and Bishop Genadio lies there inurned, but the only record of dedication that survives is of 1105; and it may be presumed that a good bit of rebuilding, after a century and a half, brought it about. The capitals, of a marble not found among the neighboring rocks, are all of one design.

Here, then, we have a single style, within the kingdom of Leon,



FIGURE 5.—SANTIAGO DE PEÑALVA; COLUMN OF NAVE

developing before our eyes from the antique within about fifty years—either in the first half of the tenth century or conceivably in the second half of the eleventh. And considering the unity of

effect in S. Miguel and Santiago, it is hardly possible to lay all this to repairs and restorations; one would have to postulate a more complete rebuilding than the wear-and-tear of a century and a half should demand; or incline to the earlier date.

III

Villafranca del Bierzo was a very important station for pilgrims. The mountains of Leon had been passed by the Port of Fuentebadon; the mountains of Galicia rose already on the horizon, where the *col* of Cebrero lies well above 3000 feet, snow-bound for a

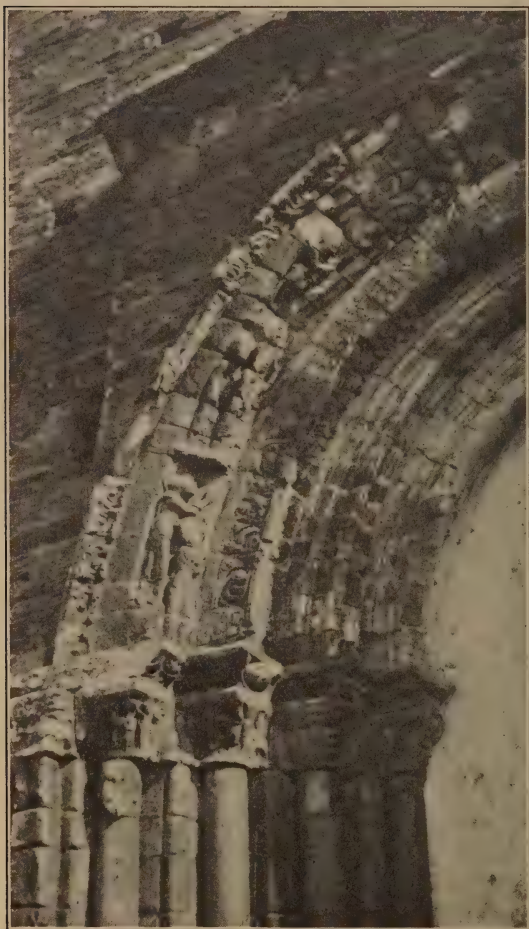


FIGURE 6.—VILLAFRANCA; CHURCH OF SANTIAGO;
PUERTA DEL PERDON

week at a time in the winter. Founded in 1070, the name of the town tells its history, *Villa Francorum*. The monks of Cluny maintained there two hospices (of which one still survives) and a monastery church. In 1120 it was thriving, and this date, or something near it, may be suggested for the church of Santiago, set high above the stream in a suburb quiet now. The

nave is roofed with wood; the apse has, outside, fine columnar buttresses, and moulded windows with short shafts in the jambs both without and within, their capitals of leaves and once a pair of doves. The west door is of no worth, but on the north side, looking toward the town, that is to say, and now walled up, the pilgrims had a magnificent sculptured *Puerta del Perdon* (Fig. 6). They must have all the credit, for the forms, the disposition, and the iconography, all are French. The archivolt sculptured with saints arranged in pairs overlapping is of the style of Saintonge: it recalls Aulnay, Saintes, and S. Croix of Bordeaux, and is strictly paralleled only at the church of Échellais. By S. Nicholas of Civray the pilgrims had come down, under the charge of S. Martin of Tours and S. Hilary of Poitiers, to Bordeaux and Roncevaux, on their way to S. James in the West. But whereas the figures in the great arch are of the style of Civray and Échellais,¹ and, curiously enough, the capitals of the shafts in the right-hand or western door-jamb are merely in the vigorous Romanesque manner, of monstrous or leafy forms, those on the left or eastern side are borrowed from the painted windows of northern France. The outermost is insignificant; it figures a palace, of Herod or of Pilate; the second carries on its two faces two groups, one of the three Maries, the other of the Crucified between SS. Mary and John, conceived, composed, and placed exactly as in a roundel of the windows at Chartres, Le Mans, or Bourges.² On the third the Three Kings are riding as knights ride in the Charlemagne window at Chartres. The scene in the fourth, of the three in bed together, with the angel above, is a familiar convention of mediaeval France, but again the relief is quaintly treated, as the glass-workers treated such in one compartment of a quatrefoil, and in a different way from the Spanish motive of the Three Kings of Orient. The last presents the Epiphany. Here two men, or parties, paid their debt to the great S. James while earning money for the further journey or working out their board. Not for the monks of Cluny but on a parish and a pilgrim church they left their mark as *Francos*—free-handed, free-spirited, the sign that they were French.

GEORGIANA GODDARD KING.

BRYN MAWR, 1916.

¹Figured in Baum, *Romanesque Architecture in France*, pp. 43 and 55.

² There is no questioning this: I had been studying the great work of Cahier and Martin shortly before seeing them, and the inference was irresistible.

PRELIMINARY REPORT ON THE GREAT CHALICE OF
ANTIOCH CONTAINING THE EARLIEST POR-
TRAITS OF CHRIST AND THE APOSTLES

[PLATE XIX]

INTRODUCTION

Recent History of the Treasure.—The antique objects, known as "The Kouchakji Silver Treasure of Antioch," number six pieces: two chalices, three bookcovers, and a large ceremonial cross. These six objects were procured by the present owners, Kouchakji Frères, in Paris, directly from the excavators in 1910. A smaller cross, also of silver, supposed to be from the same find, was procured by M. Froehner, the well known French archaeologist. It is now in Paris and has remained in his possession. The Kouchakji objects were removed to New York for greater safety at the outbreak of the war.¹

Provenance.—The seven silver objects referred to above were all found together by Arabs digging a well in Antioch, on the Orontes in Syria, in 1910. At a depth of many metres the excavators came upon underground chambers, in which the treasure was discovered. Besides the seven entire pieces they found enough crumbled fragments of silver to fill a sack. These were smelted for the value of the metal.

Chronology.—The seven pieces belong to two distinct periods; the great chalice can with certainty be dated to the second half of the first century A.D., while the bookcovers belong to the fifth century A.D.

The Constantinian Cathedral.—The original owner of the treasure is not known, but local tradition refers to the site where the treasure was found as a place where there once existed a large Christian church, all traces of which above the soil had long ago disappeared. It is thus probable that these objects formed

¹ A fully illustrated memoir on these objects is in preparation by the present writer and is expected to appear in the early part of 1917.



SILVER CHALICE FROM ANTIOCH

part of the treasure of an ancient church, now buried. No excavations have been made to ascertain the nature of this edifice, but historical records¹ show that Constantine the Great after having removed the capital of the Empire to Constantinople erected a large cathedral in Antioch, intending it to be the centre of Christian worship in the East. The city of Antioch must have been dear to this Emperor on account of its associations with Peter, Paul, and other apostles who resided there. It was in Antioch that the word Christian was first used. The Constantinian cathedral remained intact until 526 when, during an assembly of 250,000 Christians, the whole city was levelled by an earthquake and so thoroughly destroyed that the inhabitants could not find the site of their old habitations. Visited by earthquakes repeated to our day and by the Persian invasion under Kosroes in 538, the city never regained any considerable degree of its former importance. The Christians, instead of worshipping in a splendid cathedral, had to content themselves with a cave, which was finally secured to the congregation by Pius IX. Whether the great silver chalice and the rest of the treasure can actually be traced to the cathedral of Constantine cannot yet be decided, but it does not seem improbable that an object of such importance as the chalice should have come into the possession of the first Christian emperor and have been donated by him to his great Christian sanctuary, nor that it was actually in the ruins of that sanctuary that the treasure was discovered.

THE GREAT CHALICE

Size.—It is 19 cm. high; greatest diameter at the top of the bowl is 18 cm., the narrowest diameter is 13 cm. This discrepancy is due to a considerable compression of the uppermost part of the bowl, evidently caused by a blow from falling debris. The original diameter can be calculated at about 15 cm. The diameter of the bowl at the bulge is 15.5 cm., that above the lotus cup 9 cm., below the lotus cup 2 cm. The depth of the bowl is 15 cm. Height of the stand is 3.5 cm. Width of the foot is 6.5 cm. It is thus seen that the chalice previous to being compressed would have held about 2.5 litres of liquid.

Composite Parts.—There are three distinct parts: (A) an inner bowl of plain silver, (B) an outer covering or shell of "chased-

¹ J. M. Neal, *A History of the Holy Eastern Church. The Patriarchate of Antioch.* London, 1873. Eusebius, *The Life of Constantine*, London, 1845.

applied" ornaments, soldered on to the inner bowl, (C) the stand and foot, turned out of a solid block of silver.

Gilding.—The inner bowl was never gilt. The outer shell of ornaments, as well as the stand and foot, were covered with heavy gold leaf, much of which remains. Two kinds of gold were used: deep red for the sculptures of the bowl and pale yellow for the lotus cup, the stand and foot. Part of the gilding has peeled off, some has been worn off, and some seems to have been rubbed off through repeated touching by the worshippers.

Form.—A large truncate-ovoid bowl on a remarkably short and slender stem, rests on a very narrow foot disk. The stem consists of a compressed ball of solid silver which is connected with the foot disk by means of a short, slender neck. In general shape the chalice resembles the many ovoid cups of the *Bosc-coreale treasure*, now in the Louvre.¹

State of Preservation.—On the whole the preservation is remarkably good, except for the compression of the upper part of the bowl already mentioned. When found the whole surface was covered with a coating of oxide, several millimetres thick. This was skillfully removed by the renowned restorer M. André in Paris. A photograph taken before this coating was removed will be published later. The silver matrix has crystallized and become so very brittle that the chalice can only be handled with the utmost care, for even a slight tap would cause it to break into fragments. The heads and faces are unequally preserved: some, like Nos. 2, 4, and 11, are almost intact; one, No. 10, is much damaged by oxidation; while those of the principal figures, Nos. 1 and 8, have been worn, perhaps by repeated touch of the worshippers. The original gilding of some of the statues and of many of the ornaments is yet intact.

Technique.—The inner bowl was probably hammered out of a thick sheet of silver, the upper rim of which was turned outwards over itself to form a narrow collar about 1 cm. wide. The sculptures were executed by the method known as "chased-applied," that is, the ornaments were carved on a sheet of silver, the edges cut through, and then the background removed. This sculptured openwork was then soldered on to the bowl. The strokes of the artist's tool are in most places still distinct and fresh. They

¹ A. Héron de Villefosse, *Le Trésor de Boscoreale*. Institut de France, Acad. d. Inscr. et B. Lettres, *Monuments et Mém. (Mon. Piot)*. Vol. 5, pp. 7-290. Paris, 1899-1902.

show the touch of a master hand, unfailing in steadiness and delicacy. The stand and foot were turned on a lathe.

The Inner Bowl.—The inner bowl, while of highly artistic shape, is remarkably crude in workmanship, and was apparently made hastily and without any effort in regard to finish. The edge of the lip-collar was left uneven and was not even bevelled off as on the Boscoreale cups. As the other sculptures are exquisitely designed and executed, we must conclude that the inner bowl and the affixed sculptures were made by different artists, because it is absolutely incredible that the great artist of the sculptures should have done the crude work of the bowl. There must have been weighty reasons for leaving it in its crude condition when there was the opportunity to alter its appearance and give it a proper finish. The simplest explanation seems to be that the inner bowl was a sacred object which it would have been sacrilege to alter. The owners who decided upon its ornamentation were probably influenced by legends which they believed and by tradition which had long been dear to worshippers. The chalice must have been a communion cup, which in its primitive state might have been used by persons venerated by the church, perhaps since its very origin.

The Applied Sculptures.—The ornamentation consists of a complicated framework of grape vines, the stems of which form twelve loops in each of which is placed a seated personage. Between the loops, as well as inside, are scattered grape leaves, tendrils, and bunches. There are also doves, snails, a rabbit, a butterfly, and a grasshopper. A large eagle rests on a basket of Eucharistic bread, and vertically above it is a descending dove, symbolizing the Holy Ghost. There are twelve vines rising in pairs from the ground border, their upper ends joined and represented as tied in a natural manner. All these sculptures are executed and designed in a highly naturalistic style, with consummate skill and taste, and the assemblage is one of surpassing beauty.

Above the ornaments runs a free band composed of 57 rosettes of about equal size, which seem crowded in an unnatural manner, as though the artist had found it difficult to find place for a certain required number. Their sequence is interrupted by an object of about the same size, which resembles the star seen on some coins of Antioch of the pre-Roman period. The rosettes may stand for years and the star may be an indicator, or the star of the nativity, or both.

Below the main sculptures is a lotus cup with flat petals, fitting the lower part of the bowl. This cup connects directly with the short stand, the nodus of which is ornamented with a palm wreath. The foot is also ornamented with lotus petals similar to those of the cup.



FIGURE 1.—THE GREAT CHALICE; APOSTLE, NO. 2, ST. PETER
(Above, Christ as the Lamb and Figure No. 1. Over the Lamb a dish with eight loaves and two fishes)



FIGURE 2.—THE GREAT CHALICE; APOSTLE, No. 3

The Figures.—The figures, like the loops, are arranged in two horizontal alternating rows, one above the other, and in two groups, each containing five apostles facing a central figure. One of the latter represents Christ, the other Christ or the Baptist. One of these groups is more prominent than the

other and was undoubtedly intended as the front face of the chalice; the other occupies the opposite face. The two central figures can be identified as two different representations of Christ, or as Christ and the Baptist. Both are represented as enthroned. Beside the principal statue stands the Lamb, while over its head descends the Dove. The arms of Christ are stretched sidewise and the feet are resting on the footrest of the throne. This figure resembles that of the Emperor Augustus on the "Augustus Cup" of the Boscoreale treasure of Baron Rothschild in Paris. The Christ figure on the opposite side represents Christ as a boy of perhaps twelve years, holding in his hand an open roll or scroll. Five apostles are grouped around him in the same manner as around the other figure. The throne of the youthful Christ resembles that of the youthful Augustus. Those of the apostles have rounded high backs and closed sides. Many of the apostles hold scrolls in their hands; one seems to hold a purse; one possibly the handle of a sword. All the figures of the apostles have more or less the same pose,—one hand at rest, while the other is raised.

The Heads.—By far the most interesting parts of the decoration are the heads of the figures. They are not only works of great artistic merit, but show an individuality that cannot be the result of accident. Such individuality has until now been unknown in antique Christian art, for the first attempts at portraiture hitherto discovered are not older than the fifth century A.D. It seems improbable that any sculptor could have depicted twelve heads and faces, so varied and strongly individualized, had he not known the persons portrayed or had authentic portraits to inspire him. Each one of the portraits on the chalice shows most uncommon characteristics rarely found outside of classic sculpture. The face of Christ seems divine; no subsequent artist has succeeded in imparting that sweetness and gentleness which tradition gives to the Savior's features and which we here for the first time see realized. The heads of the apostles are equally remarkable. We seem to read the character of each of them; the very soul of man is here portrayed in the metal as perhaps never before or after in Christian art. Still each head is but a centimetre high! What must they have been when fresh and new! In one of these heads we seem to see the great thinker, the ready doubter, perhaps; in others the enthusiasts and ready believers. In one (No. 12) we have the face of a man of tremendous force; in No. 11 one of

great gentleness and personal beauty; in No. 5 a man of business; in No. 2 a preacher and organizer, and so on. Can these por-



FIGURE 3.—THE GREAT CHALICE; APOSTLE, No. 4

traits be identified with anything like probability? We must perforce leave the answer to the future.

The ornaments seem to symbolize the origin, rise and fulfil-

ment of the Christian religion. The nativity, the baptism, the Evangelium, the institution of the Eucharist, the dispensation, the resurrection and the eternal life in paradise are here referred to by symbols which have remained in use to our day. The presence of only ten apostles can be explained by assuming that reference is made to an occasion when only ten were present, or that the sculptor lacked portraits of two of them.

Chronology.—The date of the bowl is earlier than that of the applied ornaments, the execution of which must fall between the middle and end of the first century A.D., possibly between 57 and 87 A.D. The following are some of the reasons for such conclusions:

(A) The truncate-ovoid form of the chalice is not uncommon before the time of Augustus. From the time of Augustus and Tiberius we have the numerous Boscoreale cups, similar in shape to the chalice but with horizontal handles. After the first century this form is rare.

(B) The small size of the stand and foot is common in the first century A.D. as demonstrated by numerous specimens of glass ware, and also by the Boscoreale silver cups in the Louvre. After the first century the stand becomes higher and the foot wider, these proportions increasing till the fourth century A.D.

(C) The two figures representing Augustus as an old man and a very young man respectively, on the Augustus cup, have their correspondence in the two central figures of our chalice.

(D) The figures of Christ and of the ten apostles show a distinct similarity to the two Augustus figures. This similarity, while not exact, is nevertheless so apparent that we can conclude that these or similar, but contemporary cups inspired the master who sculptured the chalice ornaments. The similarity is especially apparent in our figures Nos. 1, 3, and 8, as well as in the others. It concerns the pose, the heads, the toga, the girdle folds, the hand with the scroll, the high rounded backs and the open sides of the thrones in two of the figures, and the foot-rests. In fact all the principal details of the two Augustus figures are found repeated with slight variations in the figures on the chalice.

(E) The admirable treatment of the heads and faces is strictly classical, and could not have been executed after the time of Hadrian. Some of them show an actual resemblance to some on the Augustus cup. They were probably made by a converted

Greek artist of great merit, whose enthusiasm and faith in his new religion blended admirably with his classical training as a sculptor.



FIGURE 4.—THE GREAT CHALICE; APOSTLE, No. 12

(F) The design and technique of the grapevines, as well as the manner of placing statues inside loops formed by vine branches,

is often seen on pottery of the first century B.C. to the first century A.D. I have lately copied a green glazed cup with these features.

(G) The nimbus and other symbols not known or used by the Christians of the first century are absent.

Antiquity and Genuineness of the Chalice.—With those who have seen the chalice these points need not be discussed, as even a hasty inspection will convince the discerning critic that the work is antique and not mediaeval or modern. But on account of the great importance of this object, many who have not had the opportunity to inspect it, will no doubt question its antiquity, and *a priori* declare it impossible that such an object could exist. The mitra of Olbia is too recent to be easily forgotten! Many facts could be adduced which will demonstrate the age of the chalice, but the best proof is in the crystallization of the metal and its great brittleness. A slight tap with a pencil might cause it to fall into fragments, the silver having lost its tensile strength. When discovered, the chalice, as well as the rest of the objects, was heavily covered with oxide of silver, as already mentioned. In that state it was photographed, and these photographs will be published in the near future. The chalice was once compressed by a heavy blow, and such compression could not have been effected after the matrix was crystallized, but must have been a blow from falling débris in ancient times. Thus the present state of the chalice shows that it is not mediaeval or modern, while the nature of its sculptures proves it to be antique.

Several prominent archaeologists examined the chalice before the oxidation was removed by M. André in Paris; among them can be mentioned M. Froehner of Paris, M. Migeon of the Louvre, and Sir Charles Read of the British Museum, who unhesitatingly declared the chalice genuine and antique. Dr. Edward Robinson, director of the Metropolitan Museum of Art in New York, has examined the chalice since it was brought to the United States, and has kindly permitted me to mention him among those who are willing to testify to its genuineness.

CONCLUSION

A chalice was found at Antioch in Syria with portrait figures of Christ and ten apostles, datable to the second half of the first century A.D. The inner bowl is of inferior workmanship and older than the exterior ornaments, which were affixed somewhat

later. The latter show the technique, skill and taste of a Greek master. The heads and faces show such individuality and character as to suggest that they are portraits. The bowl was undoubtedly a sacred relic, and the sculptures were added to help preserve and ornament it.

GUSTAVUS A. EISEN.

NEW YORK,
September 18th, 1916.

A NOTE ON TWO VASES: *A.J.A.* XX, 1916, pages 132
and 312

IN *A.J.A.* XX, 1916, pp. 125-133, Miss Gisela M. A. Richter discusses with her usual ability and scholarship a beautiful red-figured cylix signed by Euphronius, and now in the Metropolitan Museum in New York. In her list of vases which show the contest of Heracles and Busiris, to be found on page 132, she lists under the number 10, a "Crater, once in Ruvo, described by Heydemann, *Bulletino*, 1868, p. 158, 21."

I am luckily able to throw some light on the present whereabouts of this vase. It is now in the Archaeological Museum at Bari, where I saw it in May, 1914, and took notes on it and other vases in that museum. It is not Attic, as Miss Richter describes it, but is rather South Italian, probably Campanian. My notes on this vase tally exactly with Heydemann's description.

In *A.J.A.* XX, 1916, pp. 308-345, Miss Mary Hamilton Swindler has given us a valuable article on the vases in the Bryn Mawr collection. On p. 312, in discussing the black-figured hydria, No. II, she refers to a vase seen in the trade in Rome by Gerhard, and published by him in *Auserl. Vasenb.*, pl. 314. I am fortunately able to supplement this reference also. I saw this vase in the Musée Vivenel at Compiègne, in October, 1913; and I have no doubt that it is still there.

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THE ORIGIN OF THE SHAPE OF THE "NOLAN" AMPHORA

MR. H. B. WALTERS, in his *History of Ancient Pottery*,¹ divides the amphorae of the Attic black-figured technique, excluding the Panathenaic amphorae, into two main groups, the "panel-amphorae" (Fig. 1) and the "red-bodied amphorae" (Fig. 2);

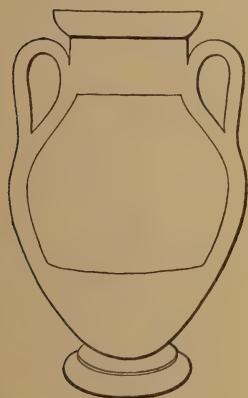


FIGURE 1.—TYPICAL
PANEL AMPHORA



FIGURE 2.—OUTLINE OF
TYPICAL RED-BODIED AM-
PHORA



FIGURE 3.—OUTLINE OF
NOLAN AMPHORA

the principal difference in shape between the two lies in the fact that in the latter class the neck is clearly defined, while in the "panel-amphorae" there is no separation of the neck from the body. Of the "red-bodied amphorae" Walters says, "The red-bodied amphora seems to have been the prototype of what is the most characteristic form of the red-figured period,—the so-called 'Nolan' amphora" (Fig. 3).

In this paper I wish to point out that there is a class of black-figured vases of almost identically the same shape as the "Nolan"

¹ Vol. I, pp. 160-162.

amphorae, which may be either contemporaneous with them, or earlier; and which, if it is earlier, has a better claim to be regarded, so far as shape is concerned, as the prototype of the "Nolan" amphora. In design these black-figured amphorae are more or less of a compromise between the panel-amphorae and the red-bodied vases, partaking of the characteristics of both. In shape



FIGURE 4.—BLACK-FIGURED PANEL AMPHORA; UNIVERSITY MUSEUM, PHILADELPHIA

a modification of the red-bodied class, they nevertheless have their designs in panels (Fig. 4).¹

On the neck is always a design of palmettes, usually three in number, of which the central one points in the opposite direction from the two at the sides. Double palmettes on the neck sometimes occur, and one vase, to which I shall refer, has a more elaborate device of palmettes placed horizontally instead of vertically. These vases are all small in size, none of them being over 30 centimetres high. This is in its way an argument for their being late and possibly contemporaneous with the early red-

figured style, since we may suppose that the larger and more important vases were done in the new technique, and these cheaper and less important specimens in the old.

My attention was first called to this class of vases by studying an amphora of this kind in the Metropolitan Museum in New York (GR523). This vase has for its subjects, (A) Heracles and the Nemean Lion, (B) Hera sending out Iris. A photograph of side A is given here (Fig. 5). At that time, I was principally interested in the subject of side A,—the slaying of the Nemean

¹ Figures 1-4 are drawn by Miss M. Louise Baker, of the University Museum, Philadelphia.

Lion by Heracles. Roughly speaking there are two principal groups of vases which show this labor,—those in which Heracles attacks the lion standing, the lion also being rampant: and those

in which Heracles stoops over the lion.

This latter motive, which Furtwängler in his catalogue of the Berlin vases calls the "Liegeschema," as opposed to the other motive, the "Stehschema," is the one employed on all the Attic red-figured vases, with one or two exceptions (which exceptions do not employ the "Stehschema" in its

normal form) and on practically all of the later black-figured vases.¹ The New York amphora, as will be seen from the photograph, employs the standing type, doubtless for reasons of space: but what is most noteworthy is that the scene is

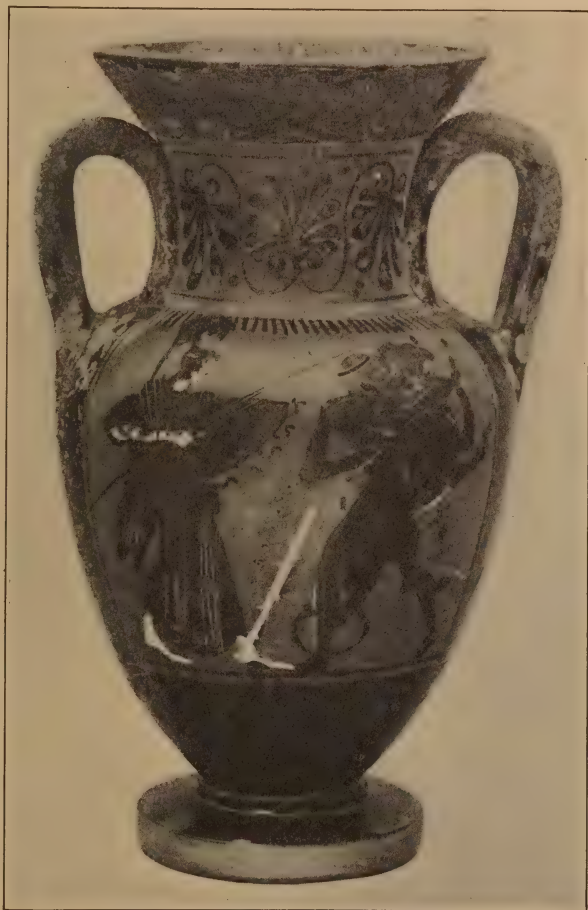


FIGURE 5.—AMPHORA IN NEW YORK (G R 523)

¹A fairly complete list of the vases portraying this popular subject, including both "Stehschema" and "Liegeschema" will be found in Appendix I.

represented in a manner radically different from the usual "Stehschema" representations: I publish here for the first time an amphora in the Museum of Fine Arts in Boston, which is a



FIGURE 6.—AMPHORA IN BOSTON (97.205)

good example of the normal manner of treating this subject² (Fig. 6).

From a comparison of examples of the normal type with the New York amphora, it will be seen that the artist of the latter vase has adopted a new method of treating the subject, departing entirely from the stereotyped manner. This suggests that the vase was

painted at a later epoch,—at a time when the "Liegeschema" was the normal way to paint the subject, and that for reasons of space the artist reverted to the archaic manner, but like many archaizers, failed, perhaps deliberately, to copy it exactly. The style of workmanship, which, though spirited, is careless, bears out the theory that this is a late black-figured vase.

² See also *Catalogue of Vases in the British Museum*, II, p. 13, fig. 22; Gerhard, *A.V.*, 93, 192, 256-7, 266, and many other places.

In studying the vases in the Louvre in September and October, 1913, I was struck by a group of small amphorae which closely resemble the New York amphora. Their numbers are F381-F389. All are small vases of the same group, and some of them in my opinion are by the same hand that did the vase in the Metropolitan Museum. I have chosen two of them for discussion here. The first, F385, has, on side A, the combat between Heracles and Cynus—inscriptions $\text{HEPAKLLE}\varsigma, \Delta\text{IO}\varsigma \Gamma\text{AI}\varsigma$, (behind Heracles) $\varsigma\text{ON}\chi\text{V}\chi$ —and on side B, a fight between a Greek and a mounted Amazon. This vase has been known a long time and was published by Millingen in 1822.¹ I insert here a photograph of side A (Fig. 7). The second of these vases, F386, has on side A, Heracles fighting the Hydra, and, on side B, Iolaus shooting in the direction of the Hydra, and Athena slaying a large crab. This vase, too, has been known a long time; it was first published in 1810 by Millin.² A photograph of side A is shown in Figure 8.

It can, I think, be seen at a glance that these two amphorae are by the same hand. Among other things, I would call attention to the essentially exact similarity of the pose of Heracles in each case; the identical manner of the treatment of the hero's drapery on both vases, down to the tucking of the tail of the lion inside his belt, a rare way to show it in black-figured vases; and to the use of white in the same places and manner. If, then, as I think, these two vases are by the same hand, a comparison of the New York amphora with them will be of interest; and if we find that it has important points in common with both of them, we can then safely claim the vase in the Metropolitan Museum as another work of the same artist.

First, a comparison of the general style of the three vases gives the following results. All three are of the late black-figured technique, but nevertheless they all have great vigor and life. The drawing is freer and shows less awkwardness and restraint than in most black-figured vases; and in all three, in the new treatment of a common subject in the New York vase, and in the violent, spirited poses of the two vases in the Louvre, there seems to be a marked striving for effect.

¹ *Ancient Unedited Monuments*, pl. 38. For the inscriptions, see Kretschmer, *Vaseninschr.*, p. 199.

² *Peintures de Vases Antiques*, II, pl. 75. This publication is almost worthless.

Nor is this all. In small details, which are the important things in a study of technique, there appear to be points in common between all three vases. I shall first, to attempt to prove this, make



FIGURE 7.—AMPHORA IN THE LOUVRE (F 385)

a comparison of the New York amphora with Louvre F385. A comparison of the drapery of Cyrenus with that of Athena on the New York vase shows a marked similarity in treatment, in long, rather careless incisions; the folds are treated in the same way, with a zigzag incision. This, however, it should be added, does not tend to prove much; for the drapery is treated in the manner more or less common in

this period. More suggestive is the sweeping curve in the lion's tail in the New York vase, and its curve when part of Heracles's costume; which is much the same. But the best criterion is the anatomy; the drawing of the leg muscles from knee to ankle is in both instances practically the same—granting somewhat more carelessness in the New York amphora.

The New York vase has more in common, however, with the vase which shows the slaying of the Hydra (F386: Fig. 8). Even such a poor publication as that of Millin cannot fail to show the almost exact similarity of Athena on side B of the Hydra vase with Athena on side A of that in New York. It can be seen at a glance, I think, that only one man could have painted the two. If cumulative evidence be wanted in corroboration, I would call attention to the position of Heracles's club, which is exactly the same in both vases, and which is white in each case, a rare way to show the club, and in itself very suggestive. I would also point out the use of meaningless inscriptions in the field in exactly the same manner in each case.



FIGURE 8.—AMPHORA IN THE LOUVRE F 386)

The result of this examination shows, I think, that the New York amphora has many important points of resemblance to the two vases in the Louvre; enough, indeed, to prove that it is by the same artist who painted them.

Furthermore, we can add to this list several other amphorae. The first to which I shall call attention is in the Louvre, and is numbered F387.¹ A comparison of the pose of Iolaus on this vase with that of Iolaus in the Hydra vase shows them to be identical in essentials down to the smallest detail, and I have therefore no hesitation in assigning this vase, too, to the same hand. Another amphora of this class in the Louvre (F388)² shows on side A Hypnos and Thanatos carrying the body of Sarpedon, while his spirit, escaping from the body, ascends into the air; side B shows an Asiatic warrior and a Greek hoplite. The warriors here have so much in common in the poses and treatment of drapery with Iolaus and Cycnus in the various Heracles vases that they seem without question the work of the same hand. This vase brings with it another, formerly part of the Bourguignon collection in Naples, and sold with that collection in 1901. This amphora is No. 19 in the catalogue of the sale, and is there published.³ On side A it has exactly the same subject as on the corresponding side of Louvre F388, except that Hypnos and Thanatos are un-winged, treated in exactly the same manner, with the spirit escaping from the body in the same way. The reverse side is interpreted as Eos carrying off the corpse of Memnon, while a warrior goes off to the left. This vase also clearly belongs to the same hand as the others.

For similar reasons I assign to the same master two vases in the Bibliothèque Nationale, Nos. 219 and 220. No. 219 is published among the photographs of Milliet-Giraudon.⁴ Side A portrays Zeus, Hera, and the infant Dionysus. A comparison of the drapery of Hera on this amphora with that of Athena on the New York amphora, and that of Cycnus on Louvre F385 is very suggestive. Compare also the inscription *καλὸς Διὸς φῶς* of this vase with the inscription *Διὸς παῖς* on the vase showing the combat between Heracles and Cycnus. Surely here the same hand is at work.

Side B shows Athena and Heracles with a bull. Heracles

¹ Publ. *Vases Antiques du Louvre*, pl. 87 sub num. (B only). A, Heracles and the Stymphalian Birds; B, Iolaus and the Stymphalian Birds.

² Publ. *Vases Antiques du Louvre*, pl. 87, sub num. (A and B).

³ *Vente du 18 au 20 mars 1901. Collection d'Antiquités grecques et romaines, provenant de Naples. A l'Hôtel Drouot, salle no. 7. Paris 1901*, p. 7, vignette, and pl. II, sub num. Also publ. *Annali dell'Inst.* 1883, pl. Q.

⁴ Nos. 32A and 33A. Also Minervini, *Monumenti di Barone*, pl. I, pp. 1-7, and Appendix, pp. i-iv.

stands quietly, but his drapery is treated quite as in the other vases where he appears; even to the curving lion's tail, tucked inside the girdle. His club, as in the other vases, is white, and represented in the same way, although here he is holding it in his hand. Athena, too, though here standing still and holding her helmet in her hand, is represented in much the same way that she is on the New York amphora and the reverse side of the vase with the combat of Heracles and the Hydra.

In the case of 220 there is more room for doubt. The best publication (which even then leaves much to be desired) is in the *Élite Céramographique*.¹ The principal reason for assigning it to the master of the New York amphora is the pose of Athena on side B of this vase, which depicts that goddess pursuing Hermes over the sea.² Here, she is almost exactly the counterpart of the Athenas of the New York amphora and the Hydra vase, except that she is running. Otherwise the folds of the drapery, the aegis, the manner of holding the lance,—everything is the same. And when on all these vases the drapery is treated in exactly the same way, it has a distinct value as a criterion that is all its own.

With these vases in New York, the Louvre, and the Bibliothèque Nationale, we have some data as to the character of the man with whom we are dealing. That he belongs to the later black-figured period is clear. His drawing has the signs of a greater freedom of touch than that of the earlier masters. Although careless as a rule, his work has life and vigor, and his style shows freedom from stiffness, and a certain striving for effect, characteristic of the late style. My feeling is that he was probably familiar with the red-figured technique and may have done some vases in that style: but I have no evidence to support this. He is by no means a great master, and cannot be mentioned in the same breath with the great names of his day,—Nikosthenes, Pamphaios, Andokides; but he is interesting and possessed of considerable originality, which he shows notably in the new treatment of a hackneyed subject in the New York amphora, and in his daring conception on both sides of Bibliothèque Nationale 220, as well as in his choice of a very unusual subject in Louvre F388 and in the Bourguignon amphora; and in Louvre F387, too, in the slaying of the Stymphalian Birds, he has taken a subject very rarely

¹ II, pl. 115.

² Side A shows the chariot of Helios rising from the sea.

found on Greek vases.¹ He can also, however, keep to the conventional stiff manner, as shown on side B of Louvre F385, both sides of Louvre F387, side B of Louvre F388, and both sides of Bibliothèque Nationale 219. Common subjects which he treats in the conventional manner (as Louvre F385 and Louvre F386) he nevertheless manages to endow with a new life and vigor. He is an altogether interesting master, though by no means great; nor is he ambitious, original though he is, to paint large vases; for all these amphorae that have been brought together are small, none of them being over twenty-three centimetres high.² Still, this proves little; for he may have painted larger vases, with which at present we are not concerned.

It will be noticed that in all these vases which have been examined the palmettes on the neck are arranged with the central one of the three pointing *upwards*, and that dots are painted on the centre of the neck on each side enclosing the central palmette. Usually these dots are four in number. This arrangement is common in the late black-figured and early red-figured period. In Chart I, I have brought together all the amphorae I have been able to find with the palmettes arranged as in the vases already examined: for it should be borne in mind that there is a group with the palmettes arranged in the opposite order, of which I shall speak later. The vases marked with the sign # are those which seem to me to be by the same hand, *i.e.*, by the master of the New York amphora, the others, either because they are unpublished, or because the publication is so poor as to afford little real evidence, one can only put in the same class, and suggest that they are perhaps the work of the same hand; though, in my opinion, Nos. 10 and 11 (Berlin 1837 and 1838) are almost certainly not. About the amphora in the Hermitage there is especial ground for doubt,³ as the publication in the *Annali* (1868, pl. H) and the description in Stephani's Catalogue leave it uncertain whether it belongs to this group of amphorae at all. In style, however, it looks like the work of the master of the New York amphora.

¹ An approximately complete list of Stymphalian Bird vases will be found in Appendix II.

² Two vases in Berlin, listed in Chart I (1837 and 1838), are considerably higher; but they are probably not the work of this master, but more probably of an earlier artist, perhaps the painter of the Athens amphora (see Chart II).

³ Chart I, No. 15. Reinach. (*Rép. des Vases*, I, p. 321) wrongly calls this vase part of the "anc. coll. James Thomson."

To the vases of this master may also be added, although it does not belong in the chart, Bourguignon Sale Catalogue, No. 20,¹ a small amphora 16.5 centimetres high, of somewhat different shape, being plumper and squatter in form, with, however, the same general scheme of design, with the palmettes on the neck facing from left to right instead of vertically. This vase shows on side A, Heracles attacking two Centaurs; on side B we have a Lapith attacking a Centaur. Heracles is here treated in a very similar manner to the Heracles of the other vases, and I think we can see the same hand here at work.

CHART I

AMPHORAE WITH CENTRAL PALMETTE POINTING UPWARDS

No.	Museum	Subjects, etc.	Height in Centimetres
#1	New York GR523.	(A) Heracles and the Nemean Lion. (B) Hera sending out Iris. Fig. 5.	22.6
#2	Louvre F385.	(A) Heracles and Cynus. (B) Greek and Amazon. Millingen, <i>Ancient Unedited Monuments</i> , pl. 38 (Fig. 7).	18
#3	Louvre F386.	(A) Heracles and the Hydra. (B) Athena slaying a crab. Millin-Reinach, II, pl. 75. Reinach, <i>Rép. des Vases</i> , I, p. 117, No. 5 (Fig. 8).	20
#4	Louvre F387.	(A) Heracles and the Stymphalian Birds. (B) Iolaus and the Stymphalian Birds. <i>Vases Antiques du Louvre</i> , pl. 87, sub. num.	20.5
#5	Louvre F388.	(A) Hypnos and Thanatos with body of Sarpedon. (B) Asiatic Archer and Greek Hoplite. <i>Vases Antiques du Louvre</i> , pl. 87, sub. num.	21
#6	Bourguignon Sale Cat., No. 19.	(A) Same as Louvre F388. (B) Eos carrying body of Memnon. <i>Annali dell' Inst.</i> 1883, pl. Q. Bourguignon Cat., pl. II, sub. num., and p. 7, vignette.	18
#7	Bibliothèque Nationale 219.	(A) Zeus, Hera, and the infant Dionysus. (B) Athena, Heracles, and a bull. Milliet-Giraudon, <i>Vases Peints du Cabinet des Médailles</i> , pls. 32A. 33A, and elsewhere.	20.5
#8	Bibliothèque Nationale 220.	(A) Chariot of Helios rising from the sea. (B) Athena pursuing Hermes over the sea. <i>Élite Céramographique</i> , II, 15.	20
#9	Kunsthistorisches Museum, Vienna, Cat. Sacken and Kenner, p. 193, No. 46.	(A) Poseidon and Ephialtes. (B) Artemis and a giant. Laborde, <i>Vases de Lamberg</i> , I, Introd. p. 14, vignette 2, and pl. 43, 2. Reinach, <i>Rép. des Vases</i> , II, p. 164, No. 2 and p. 189, No. 2.	17

¹ Publ. *Bourguignon Sale Cat.*, pl. II, sub num. (side A only).

CHART I—*Continued*

AMPHORAE WITH CENTRAL PALMETTE POINTING UPWARDS

No.	Museum	Subjects, etc.	Height in Centimetres
10	Berlin 1837. ¹	(A) Birth of Athena (?). (B) Peleus and Atalanta. Unpublished.	24
11	Berlin 1838. ¹	(A) Two goddesses. (B) Same. Unpublished.	31
12	Berlin 1839.	(A) Mounted Amazon and white dog. (B) Amazon with two horses and dog. Unpublished.	16
13	Ashmolean 217.	(A) Hero mounting horse. (B) Amazons arming. Unpublished.	17
#14	Memorial Hall, Philadelphia, 99-169.	(A) Athena in chariot. (B) Youth with quadriga. Unpublished.	19
15	Victoria and Albert Museum, London.	(A) Bacchic scenes. (B) Same. Unpublished.	*
16	Also probably: Hermitage 59.	(A) Athena in quadriga and Heracles attacking giant. (B) Civic oath. <i>Annali dell' Inst.</i> 1868, pl. H (side B). Average height, excluding the two Berlin vases (which are more probably in the other class), the Victoria and Albert vase (height unknown to me), and the Petrograd vase (which is doubtful)=19.13 cm.	19

It may appear strange to lay emphasis on the way the palmettes on the neck point: but it is a curious fact that, whereas the vases with the central palmettes pointing upwards rarely attain a height of more than twenty-three centimetres, with the exception of the two in Berlin already discussed, and often are not so high, those with the opposite palmette decoration (*i.e.*, with the centre palmette pointing downward), so far as I have been able to learn their dimensions, are of a height of between twenty-four and thirty centimetres, and therefore average about eight centimetres higher. There is one exception to this rule, a vase in the Oesterreichisches Museum in Vienna (Masner, 226), and there may be others among those that I have not been able to measure in the list I give.

I have chosen from this group of amphorae three for reproduction, and shall discuss first an amphora in the National

¹ Probably by the master of the Athens amphora. See vases of Chart II.

* Unknown to me.

Museum of Athens, as it is a fairly representative vase. It was bequeathed to the Museum by an English collector, and is a recent acquisition, so that it will not be found in the catalogues of Collignon and Couve or Nicole; it is inventoried with the number 14459. I am able to show photographs of both sides of this vase (Figures 9 and 10).¹ Side A shows an Amazon carrying a wounded comrade to left, followed by another Amazon; side B shows two more Amazons marching to left.

There seems to me in this vase a distinct difference in style from those already discussed; it is stiffer and more archaic,

and the vase shows much less originality of treatment. The drawing, though careless, is of an earlier period; not much earlier, but still distinctly earlier.



FIGURE 9.—AMPHORA IN ATHENS; SIDE A (Inv. 14459)

¹ I am especially indebted to M. Stais, the Director of the National Museum in Athens, for his great kindness in permitting me to photograph and publish this vase.

It is interesting in this connection to compare with this, two vases of similar style in the British Museum, Nos. B188 and B189. The former shows: (A) musical contest; (B) the same, with



FIGURE 10.—AMPHORA IN ATHENS; SIDE B (Inv. 14459)

slight variations. I give a photograph of side A (Fig. 11). It will be noticed at once that the drawing is far more careful, and in every way superior to that of the amphora in Athens. And yet I believe that enough points in common between the two can be found to justify the conclusion that they are the work of the same hand. Details of drapery are treated in the same way in both vases; compare, for example, the drapery of the

first Amazon on side B of the Athens vase, where the folds are in wavy lines; this is quite different from the sharper zig-zags used by the master of the New York amphora. The folds of the flute-player's himation in the British Museum amphora resemble more those used in the vase in Athens than the work of the master

of the New York amphora. Taking again the British Museum specimen, we note a far greater attention to detail and more careful drawing than in the vases of the New York group. This greater attention to details (which we can see also in Athens 14459, careless as it is) and the stiffness and archaic quality of the figures in the two vases, as well as the larger size (the Athens amphora is thirty centimetres high; British Museum B 188 is eleven inches, or 27.9 centimetres high) point to an earlier date than the period to which the group of the amphora in the Metropolitan Museum belongs; to a period when the black-figured technique was still reigning supreme, and not giving place to the new style. The larger size shows that, from a commercial point of view, they were more important than the other vases and deserving of better execution.



FIGURE 11.—AMPHORA IN THE BRITISH MUSEUM (B188)

The other British Museum amphora, B189, has on side A (Fig. 12) two fully-armed warriors confronted; on side B a warrior arming, in the presence of an old man. Though somewhat more careless in style than B188, it has many resemblances to it and also to the vase at Athens, in the treatment of the himatia, and the spots on the breast of the chiton of the warrior on the left, which exactly resemble those on the drapery of the

three figures in B188 and the Amazons on the amphora in Athens. Here, too, we note a dryness and stiffness of style with none of the life shown in the work of the master of the New York vase. All these things indicate that this specimen in the British

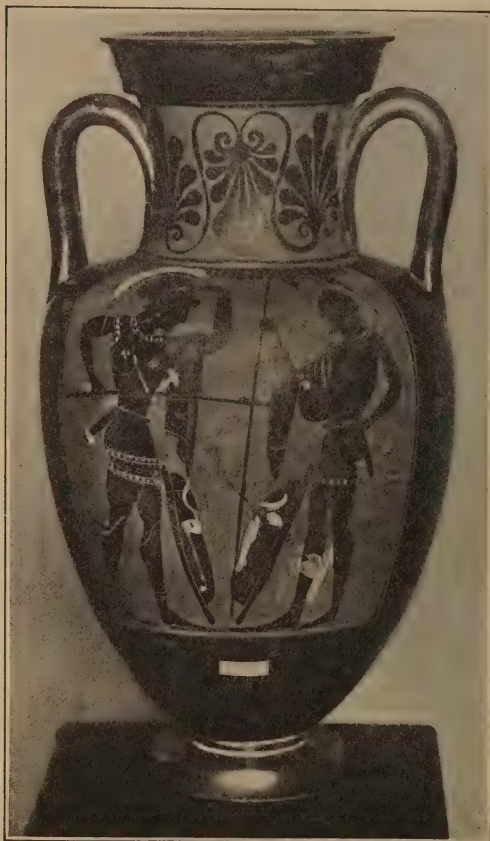


FIGURE 12.—AMPHORA IN THE BRITISH MUSEUM
(B189)

Museum is of the same period and probably by the same hand as the two previously described in this group. Further, there is its height, as a slight support to this theory; which is 11.1 inches, or 28.2 centimetres.

Another vase which is probably by the same hand is in Leyden.¹ Side A portrays two warriors crouching to left, concealed by their shields. Roulez's identification of them as Odysseus and Diomed may be dismissed as fanciful. Side B shows a warrior taking leave of a woman. Side A of this vase can be compared in a general way with side B of the Athens amphora; while side B can be

compared with side A of British Museum B189. The height of this vase is unknown to me, as I have not seen it and Roulez does not give its dimensions.

Another vase which may be attributed to the same hand is in Naples (Heydemann, 2537). Although it is unpub-

¹ Roulez, *Choix de Vases Peints du Musée de Leyde*, pl. XVI, 2, and Reinach, *Rép. des Vases*, II, p. 274, 2. 3.

lished,¹ the description of the vase in Heydemann's catalogue, while unsatisfactory, shows its style; and I saw and examined the vase in the Naples Museum in the winter of 1914. In shape and palmette pattern it is identical with the British Museum amphorae and the vases in Athens and Leyden. It has on side A, Theseus (according to Heydemann), or possibly Heracles, pursuing a Centaur; while side B has a woman and a Centaur. The style is possibly a little more archaic than in the British Museum vases, though not enough to make it of an earlier period; so that it seems probable to me that Naples 2537 is also by the same hand, at an earlier period of activity. The vase is twenty-seven centimetres high.

Assuming that the five vases we have just discussed are by the same hand, let us see what we can deduce of the character of the artist. In the first place he has all the dryness, stiffness, and genuine archaism of the black-figured period, before

the new technique came in. In originality of conception, or design, he is far behind the master of the New York vase. His subjects are lacking in interest, and, on the whole, lifeless

in treatment. Of the vases in Chart II these are the only ones that can be attributed safely to his hand; the others are manifestly by different hands or, being unpublished, are impossible to classify. They are put here because they have the same scheme of palmette decoration. And in using these charts it should be remembered that they are obviously incomplete, and that there are undoubtedly many more vases of these classes than I have been able to find.

FIGURE 14.
—PARTIAL
SECTION OF
AMPHORA,
ATHENS
CLASS



FIGURE 13.
—PARTIAL
SECTION OF
AMPHORA,
NEW YORK
CLASS

Another peculiarity worth noticing here is the way in which the handles of these amphorae are joined to the neck. In the vases by the master of the New York amphora, the handle invariably is continued from the time it reaches the neck, along it to the juncture of neck

¹ Heydemann wrongly says that this vase is published in Dubois-Maison-neuve, *Introd. à l'Étude des Vases Antiques*, pl. 62, 1. The vase there published is Naples 2517. This vase is unpublished.

and shoulder, as in most of the "Nolan" amphorae. I have endeavored to illustrate this in Figure 13. In the vases by the master of the Athens amphora, however, the handles stop almost immediately on reaching the neck, without going in the same way, just before the neck and the shoulder join, as I have tried to show in Figure 14.¹ This is more in the manner of the "red-bodied" amphorae. This slight difference shows that the vases of the New York class adopt a later method, while those of the Athens class retain the early method of joining the handle to the neck—in itself a suggestion that the Athens type is the earlier.

In explanation of Chart II it should be noted that vases preceded by the sign # are those which can be assigned to the maker of the Athens amphora. The amphora in Syracuse and Louvre F383 are probably by one artist, and may possibly be by the master of the New York amphora.²

Two amphorae of this type that I have seen have the neck decorated with the regular double palmette of the ordinary red-bodied amphora. The first is in Naples (SA123), and has, on side A, a man driving a quadriga to left. One of the horses is white, and details of drapery, harness, and the like are inserted in white overcolor. Side B shows a warrior leading his horse by the bridle, and preceded by a bearded man. This vase is 28 centimetres high, and is unpublished.

The second, also unpublished, is in the Museum of Corneto-Tarquiniæ. Its height I do not know. Its subjects are (A) combat between two warriors; (B) combat between a Greek and an Amazon. From my notes taken in the museums where these vases are kept, and my recollection of them, I should put them as archaic rather than archaizing, and as either a little earlier than, or contemporaneous with, the Athens amphora. As they are unpublished, it is impossible to tell whether they are by the same hand or not: but my feeling is that they may well be so, and antedate the class listed in Chart II.

¹ These drawings are the work of Miss M. Louise Baker of the University Museum, Philadelphia.

² There are two amphorae of this shape which belong either in Chart I or Chart II, but it is impossible for me to classify them, on account of the lack of adequate description. The first is in the Louvre (F384), and has, on side A, a quadriga seen from the front. Pottier in his Catalogue gives no description of side B. The second is in the Museo Baracco in Rome; but I do not know what its subjects are or to what class it belongs.

CHART II

AMPHORAE WITH CENTRAL PALMETTE POINTING DOWNWARDS

No.	Museum	Subjects, etc.	Height in Centimetres
#1	Athens, National Museum Inv. 14459.	(A) Amazon carrying wounded comrade, followed by second Amazon. (B) Two marching Amazons. Figs. 10, 11.	30
#2	British Museum B188.	(A) Musical contest. (B) Musical contest. Side A in Fig. 12.	27.9
#3	British Museum B189.	(A) Two warriors confronted. (B) Warrior arming. Side A published in Fig. 13.	28.2
#4	Leyden.	(A) Two crouching warriors. (B) Warrior and woman. <i>Roulez, Choix de Vases Peints du Musée de Leyde</i> , pl. XVI, i; <i>Reinach, Rép. des Vases</i> , II, p. 274, 2, 3.	*
#5	Naples 2537.	(A) Heracles (or Theseus) attacking Centaur. (B) Woman and Centaur. Unpublished.	27
#6	Louvre F389.	(A) Musical contest with the lyre. (B) Musical contest with the flute. Unpublished.	*
7	Louvre F381.	(A) Satyr carrying off a Maenad. (B) Satyr playing the lyre. <i>Vases Antiques du Louvre</i> , pl. 87, sub. num. (side A).	26
8	Louvre F382.	(A) Sisyphus rolling his stone. (B) Heracles and the Amazons. <i>Vases Antiques du Louvre</i> , pl. 87, sub. num. (side A).	24
9	Museum of Syracuse, Sicily.	(A) Aeneas carrying Anchises. (B) Dionysus and a Maenad. <i>Monumenti Antichi dei Lincei</i> , XVII, p. 498 and pl. 39 (side A).	26.5
10	Louvre F383.	(A) Same as in Syracuse amphora. (B) Same as in Syracuse amphora. Unpublished.	*
11	Vienna. Oesterreichisches Museum, Masner 226.	(A) Peleus and Thetis. (B) Chiron and Nereus. Unpublished.	19.8
12	Museo Poldo-Pezzoli, Milan, Inv. 442.	(A) Two dancing Maenads. (B) Cithara player and nude youth. Unpublished.	*
#13	University Museum, Philadelphia, Inv. MS403.	(A) Discus-thrower and spectators (B) Boxers and spectators. <i>Museum Journal</i> , VI, 1915, pp. 169-172, Figs. 89, 90; Fig. 4 in this article.	27.3
14	Museum, Island of Mykonos, Greece. ¹	(A) Two women in conversation. (B) Two women in conversation.	*

* Unknown to me.

¹ As Baedeker warns the student not to take notes in the Museum of Mykonos, this vase is described from memory, as I took notes on the objects I saw when I returned to Athens from a trip to the Islands.

In conclusion it may be asked, "What has been the object of this paper?" It has had one main purpose, which, although it seems to have been lost sight of, I have nevertheless tried to follow, and that is to determine the origin of the shape which in the red-figured period is called the "Nolan" amphora. As I said at the beginning,¹ if vases of the shape of the amphorae we have been studying can be shown to have been made before the red-figured technique began (so that they could not have taken their shape from the "Nolan" class), they have a better claim to be regarded as the prototype of the "Nolan" amphora than the very differently shaped "red-bodied" amphora; and the comparative simplicity of design in these vases also is a point in their favor as being more nearly like the tendency in the "Nolan" amphorae. I have tried to show that, in my opinion, the amphorae of the class typified by the vases in Athens and the British Museum must be regarded as having been made in the middle of the black-figured period, before the introduction of the red-figured technique. To this period also belong the two vases in Berlin mentioned under Chart I. Granted all this, we have this form of amphora (not very common, to be sure, but still possible) side by side with the ordinary panel-amphora, and the red-bodied amphora. The result is to put the claim of the red-bodied amphora to be the direct prototype of the "Nolan" out of court. The "Nolan" amphora was evolved from a marriage, if one may use such a metaphor, of the panel-amphora with the red-bodied amphora, the child of which marriage was the shape of black-figured panel-amphora which has been studied in this paper. From this type, then, in the red-figured period, the "Nolan" amphorae were developed. Then, when the red-figured technique had started, in the transitional epoch, and possibly also contemporaneous with the severe red-figured style, the age of masters like Nikosthenes (who, it must not be forgotten, has signed red-figured vases),² Pamphaios, Andokides, Epiktetos, and perhaps Chachrylion, our "archaizing" master of the New York amphora appears and shows what the black-figured technique was capable of attaining as regards freedom of drawing, originality, and vigor. To this period, too, or a little earlier, and possibly to the same hand, belong the amphora in

¹P. 440.

²*E.g.*, cantharus in the Museum of Fine Arts, Boston, No. 00.334; Berlin 2324; Würzburg III, 358 (painted by Epiktetos); Louvre F125.

Syracuse and Louvre F383; as well as Vienna, Oesterreichisches Museum 226, and all vases in Chart I not already mentioned. As for the vases with the double palmettes on the neck, my belief is that they are the earliest of all; and that later the more graceful single palmette pattern was evolved; a design that is found on other late black-figured vases, and which persists in the red-figured period.¹

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¹ I must express here my indebtedness to the authorities of the British Museum for sending me, with the kindness they invariably show, the photographs of the amphorae B188 and B189, and for their permission to publish them; to M. E. Pottier of the Louvre for sending me the photographs of the vases F385 and F386; to Miss Gisela M. A. Richter and Mr. Lacey D. Caskey for the photographs of the amphorae in New York and Boston illustrated here; and to M. Stais of the National Museum in Athens for kindly allowing me to have photographed, and to publish, the amphora in Athens, a new acquisition of the Museum. The photographs of the Athens vase are the work of Herr Rudolph Rohrer, the photographer of the German Archaeological Institute in Athens. I am also under a debt of obligation to the kindness of Professor George H. Chase, who read this paper over on my return to America, and many of whose suggestions are incorporated in this revised version.

APPENDIX I¹, PART I

LIST OF VASES SHOWING HERACLES AND THE NEMEAN LION.

BLACK-FIGURED VASES.

I. VASES OF THE STANDING WRESTLING TYPE.

A. *No Onlookers.*

Cylices: Gerhard, *Auserl. Vasenb.* 238 (in Berlin: signed by Ergotimus); Louvre F82 (signed by Neandros); Torlonia Collection, Rome (signed twice by Charitaios); Fitzwilliam Museum 60 (signed by Hischylos and Sakonides); Naples 2709 and 2722; Athens, No. 896 in the supplementary catalogue of Nicole; Sambon Sale Catalogue (1914) No. 94; Graef, *Akropolis-Vasen*, 1618, 2005; and one each in the Museums of the Piraeus and Boulogne-sur-Mer. Total, twelve vases.

Hydria: Metropolitan Museum, *Cesnola Collection* (Myres), p. 293, No. 1729.

Amphorae: Louvre F105 (signed by Nikosthenes); Berlin 1840; Bologna (*Cat. Nocr. Fels.*), 20; Würzburg III, 257; Adria, Museo Bocchi 4; and one in the museum of Palermo. Total, six vases.

Lecythus: Madrid 85.

Scyphus: Athens, No. 810 in the catalogue of Collignon and Couve.

Total, twenty-one vases.

B. *Athena Present.*

Amphorae: New York GR523 (abnormal treatment; see article) Gerhard, *Auserl. Vasenb.* 192; Museo Bocchi, Adria 2. Three vases.

Lebes (with other subjects as well): Louvre F62.

Cylix: Berlin 1808.

¹ I do not here give publications of the vases, as in many cases a reference to the catalogues will give them. Vases in Munich, unless expressly so stated, are given with the numbers of Otto Jahn's catalogue, rather than their present numbers in the Pinakothek. Petrograd references are to Stephani's catalogue; and the Naples numbers refer to the catalogue of Heydemann, which are different from those in use now. Publications will be given when the vase is lost, or in an uncatalogued museum. References to Würzburg are to the catalogue of Urlichs, usually to the third volume. Vases in Bologna are in the two catalogues of Pellegrini; the first (*delle collezioni Palagi ed Univesitaria*, referred to as Pal. Univ.) appeared in 1902; the second (*delle Necropoli Felsinee*, referred to as Nocr. Fels.) was published in 1912.

Scyphus: Museum of Syracuse, publ. *Mon. Ant.* I, columns 898-900, and fig.

Lecythus: Museum of Eleusis.

Total, seven. vases.

C. Iolaus Present.

Amphorae: Louvre F106 (signed by Nikosthenes), British Museum B233; Petrograd 65; Bibliothèque Nationale 234.
Four vases.

Cylix: Naples 2516.

Total, five vases.

D. Athena and Iolaus Present.

Amphorae: Berlin 1720 (signed by Exekias); Berlin 1717, 1841; Bibliothèque Nationale 215, 231; British Museum B232, B234; Louvre F33, F237; Boston, Inv. 97.205; Munich 588, 645, 1346 (the numbers refer to the catalogue of Otto Jahn); Würzburg III, 110, 261, 263, 310; Boulogne 420; two in the Vatican (*Museo Gregor.*, ed. II, vol. II, pls. 45, 2, and 48,2); Bologna, (*Cat. Necr. Fels.*) 19, 151; Compiègne 977; Fontana Coll. 23 (now in Bonn); and one in the Museo Papa Giulio, Rome. Twenty-five vases.

Celebe: University Museum, Philadelphia, Inv. MS. 404.

Oenochoae: Louvre F37; British Museum B621; Boulogne 62.
Three vases.

Lecythus: In Syracuse, numbered 2320. Athena is represented twice.

Total, thirty vases.

E. Hermes and Iolaus Present.

Amphorae: Boston, Robinson 321; Würzburg, III, 88; Toulouse 337; Noel des Vergers Sale Cat. 111 (present location unknown).

Total, four vases.

F. Athena, Hermes, and Iolaus Present.

Amphorae: Vatican (*Museo Gregor.*, ed. II, vol. II, pl. 48, 1); Petrograd 50; Würzburg III, 245; Louvre F219, F229; Berlin 1693; University Museum, Philadelphia, Inv. MS. 4802.
Seven vases.

Lecythus; One in the Museum at Palermo.

Total, eight vases.

G. Two Spectators, Falling Into Neither of the Groups of Two Mentioned.

Amphorae: One signed by Nikosthenes (Klein, *Meistersig.*, ed. 2, p. 55, No. 6); Munich 307; Louvre F1; and one in the Museum of Girgenti. Four vases.

Vase of singular form; (Fig. 15; Perrot and Chipiez, X, p. 38).

Cylices: Louvre F91; Munich 634. Two vases.

Oenochoae: Munich 363, 1199. Two vases.

Total, nine vases.

H. Various Spectators, in Various Numbers.

Hydriae: Gerhard, *Auserl. Vasenb.*, 93; Würzburg, III, 130; Florence, Inv. 70994; Vatican (*Mus. Gregor.*, ed. II, vol. II, pl. 15, 2). Four vases.

Amphorae: One signed by Nikosthenes (Klein, *Meistersig.*, ed. II, p. 55, No. 7); Bibliothèque Nationale 206; Munich 158;

Marseilles 1597; Louvre E859; Compiègne 982; Northampton Coll. (Burlington Fine Arts Club Exhibition, 1904, No. 9 and pl. 89 in cat.). Seven vases.

Oenochoae: Athens, Collignon-Couve 771; Vatican (*Mus. Gregor.*, ed. II, vol. II, pl. 10, 2). Two vases.

Cylices: Bibliothèque Nationale 314; Athens, Nicole 906; Munich 886; Boulogne 61; Graef, *Akropolis-Vasen*, 1629; one in the Museo Papa Giulio, Rome; and one in the Museum of Taranto. Seven vases.

Cyathi: Munich 1162; Naples, SA132. Two vases.

Total, twenty-two vases.

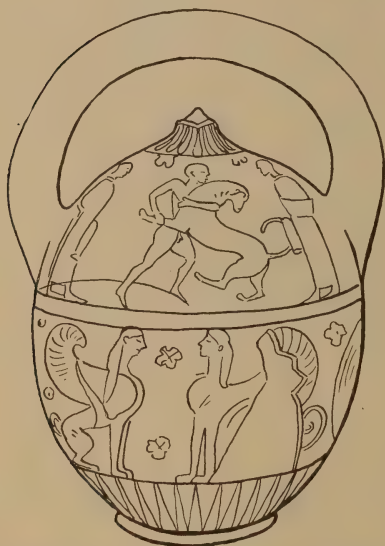


FIGURE 15.—VASE OF SINGULAR FORM
IN THE LOUVRE

Grand Total of Black-figured Vases Showing the Standing Wrestling Motive.

Heracles and the Lion alone.....	21
In presence of Athena alone.....	7
In presence of Iolaus alone.....	5
In presence of Athena and Iolaus.....	30
In presence of Hermes and Iolaus.....	4
In presence of Athena, Hermes, and Iolaus.....	8
Two Spectators.....	9
Various Spectators.....	22

Grand total of this class 106 vases

IA. ALLIED TO THE STANDING TYPE, BUT HERACLES THRUSTS A SWORD INTO THE LION. THE GENERAL CONCEPTION AND COMPOSITION, HOWEVER, IS THE SAME.

A. No Onlookers.

Amphorae: Munich 648; Naples 2705. Two vases.

Oenochoae: Two in Florence (publ. *Röm. Mitt.* 1887, p. 175, Nos. 12, 13). Two vases.

Fragments: British Museum B129, No. 7, and Graef, *Akropolis-Vasen*, 1465. Two vases.

To this may be added a Proto-Corinthian alabastron in Syracuse (publ. *Annali dell' Inst.* 1877, pl. CD, 2).

Total, seven vases.

B. One Onlooker.

Lecythus: Brussels, Ravestein 290.

Cylix: Munich 1028.

Total, two vases.

C. Athena and Iolaus Present.

Amphorae: Würzburg III, 264; Munich 1079; British Museum B160; Forman Sale Catalogue, 311; Inghirami, *Vasi Fittili*, 61, 62. Six vases.

Scyphus: Athens, Nicole 925.

Total, seven vases.

D. Various Onlookers.

Amphorae: Louvre E812; Berlin 1713; Beugnot Sale Cat. 29. Three vases.

Celebae: Athens, Collignon-Couve 789; Geneva 13. Two vases. These two may well be by the same hand.

Cylix: Berlin 2043.

Lecythus: British Museum B530.

Oenochoe: Museum of Corneto-Tarquiniæ.

Total, eight vases.

Grand Total of Vases of this Class.

No Onlookers.....	7
One Onlooker.....	2
Athena and Iolaus.....	7
Various Onlookers.....	8
Grand total.....	<u>24</u> vases

IB. SAME, BUT HERACLES USES A CLUB IN ATTACKING THE LION.

A. No Onlookers.

Cylices: *Annali dell' Inst.*, 1859, pl. C (signed by Tleson); Fitzwilliam Museum 60 (signed by Hischylos and Sakonides); Graef, *Akropolis-Vasen*, 1580, 1727. Four vases.

Lecythus: Munich 1328.

Corinthian Pinax: Berlin 910.

To these may be added a Corinthian aryballus seen in the trade in Athens by Furtwängler, and described by him (Roscher, *Lexikon*, I, p. 2139, 52f; p. 2196, 8f.).

Total, seven vases.

B. Various Onlookers.

Amphorae: Louvre F108; Klein, *Meistersig.*, ed. II, p. 53, no. 1 (both signed by Nikosthenes). Two vases.

Grand total for this class: Nine vases.

II. VASES OF THE LATER RECUMBENT WRESTLING TYPE, WITH HERACLES BENDING OVER THE LION.

A. No Onlookers.

Amphorae: Louvre F215; Munich 315; Petrograd 115; Naples RC191; Museo Bocchi, Adria, 3; Boulogne 422, and another without a number in the same museum. Seven vases.

Hydriae: Petrograd 17; Vienna, K.K. Münz-und-Antiken-Kabinet (now Kunsthistorisches Museum), Cat. Sacken and Kenner, p. 170, No. 22; Margaritis Sale Cat. 102. Three vases.

Cylices: Madrid 56 (signed by Sokles); Berlin 1753, 1772; Petrograd 218; Heydemann, *Gr. Vasenb.*, p. 5, note 1, h; Graef, *Akropolis-Vasen*, 1382, 1728, 1729, 2002, 2003, 2004, 2054, 2055, 2056, 2057; British Museum B434; Marseilles 1601; and one in the Fiedler Coll. Dresden (*Arch. Anz.* 1891, p. 23). Eighteen vases.

Oenochoae: New York Inv. 10:210:16; Millingen, *Vases de Coghill*, pl. 34, 2; British Museum B491; Louvre F349; Jatta Coll., Ruvo, 1600. Five vases.

Lecythi: Louvre Inv. MNB909; Naples SA156; Petrograd 242; three in the Museum at Palermo; one in the Museum of Taranto; two in the Museum of Nauplia; Margaritis Sale Cat. 78; Sambon Sale Cat. 95; a lecythus in my own possession; and three in the Museum of Syracuse. Fifteen vases.

Scyphi: Petrograd 335; Naples 2525. Two vases.

Vase of unknown form: Tischbein, *Vases d'Hamilton*, IV, 23.

Total, fifty-one vases.

B. In Presence of Athena Alone.

Amphorae: British Museum B276; Munich 7, 618, 1279; Museo Poldo-Pezzoli, Milan, Inv. 439; Museum of Syracuse, publ. *Mon. Ant.* XVII, pl. 40; University Museum, Philadelphia, Inv. MS1753; and one in the Museo Papa Giulio; Rome. Eight vases.

Hydriae: British Museum B318 and B348. Two vases.

Celebe: Louvre F308.

Oenochoe: Petrograd 68 (signed by Taleides); New York, Inv. 06:1021:66; British Museum B489, B490; and Forman Sale Cat. 328. Five vases.

Lecythi: Naples 2820; Dresden 17 (catalogue by Hettner); Athens, No. 270 in the early catalogue by Collignon (not in the catalogue of Collignon and Couve, or that of Nicole); one in the Museum of Palermo (numbered 316); and two in the Museum of Syracuse. Six vases.

Total, twenty-two vases.

C. Iolaus Alone Present.

Amphorae: British Museum B216; and an amphora formerly in the Campana Coll. (Cat. VIII, 59). Two vases.

Scyphi: Dresden 177; Petrograd 291. Two vases.

Total, four vases.

D. In Presence of Hermes Alone.

Amphora: Castellani Sale Cat., 1884, No. 55.

Oenochoe: Munich 1190.

Total, two vases.

E. In Presence of Athena and Iolaus.

Amphorae: Louvre F238; Naples 2503; Munich 643, 784, 1394; British Museum B159, B199, B217; Petrograd 219; University Museum, Philadelphia, Inv. MS3497; Gerhard, *Etr. Kampan. Vasenb.*, pl. D, 1; Bologna, *Necr. Fels.* 60; Compiègne 980; one in the Museo Papa Giulio, Rome; and one in the Museum of Corneto-Tarquiniæ. Fifteen vases.

Hydriæ: British Museum B301, B308; Berlin 1725; Munich 44, 69, 134, 427; Petrograd 282; Compiègne 1055; Vatican (*Mus. Gregor.*, ed. II, vol. II, pl. 18, 2); and University Museum, Philadelphia, Inv. MS2463. Eleven vases.

Lecythi: Naples 2745; Berlin 2004; Munich 472, 761; Athens, Collignon-Couve 712; Heydemann, *Gr. Vasenb.*, pl. V, 3 (now in the Museum at Strassburg); *ibid.*, page 5, note 1, g; two in the Museum of Syracuse; and possibly also Athens, Collignon-Couve 909, though this may be the struggle with the Erymanthian Boar. Ten vases.

Oenochoe: Toulouse 340.

Scyphus: Petrograd 184.

Total, thirty-eight vases.

F. In Presence of Hermes and Iolaus.

Amphora: Munich 270.

Lecythus: Bologna, *Pal. Univ.* 234.

Total, two vases.

G. In Presence of Athena and Hermes.

Amphora: Naples SA148.

Lecythus: Heydemann, *Gr. Vasenb.*, p. 5, note 1, f.

Total, two vases.

H. In Presence of Athena, Hermes, and Iolaus.

Amphora: Museum of Corneto-Tarquinoa.

Hydriae: British Museum B303, B305, B306, B307, B330; Munich 64, 445, 484; Northampton Coll. (Burlington Fine Arts Club, Cat. 1904, p. 102, No. 20, pl. 99); Gerhard, *Auserl. Vasenb.*, 314 (now in Compiègne). Ten vases.

Lecythus: Vienna, Kunsthistorisches Museum, Cat. Sacken and Kenner, p. 158, No. 24.

Total, twelve vases.

I. Vases in Which the Local Nymph Appears.

Amphora: Zürich, Cat. Blümner, 7.

Hydriae: British Museum B319; Würzburg, III, 131; Berlin 1890; Florence 3867; Petrograd 25; Gerhard, *Auserl. Vasenb.*, 183. Six vases.

Total, seven vases.

J. Two Onlookers, who Fit into none of the Groups above.

Hydriae: Bibliothèque Nationale 226 (signed by Pamphaios); Würzburg III, 143; and one in the Museum of Bari. Three vases.

Cylix: Athens, Collignon-Couve 1101.

Lecythi: Two in Vienna, Kunsthistorisches Museum (Cat. Sacken and Kenner, p. 167, No. 113, and p. 219, No. 92); one in the Museum of Palermo. Three vases.

Scyphus: Museum of Syracuse, publ. *Mon. Ant.* XVII, col. 283.

Total, eight vases.

K. Four Onlookers.

Hydriae: Würzburg, III, 124 and 126; Raifé Sale Cat. 1313. Three vases.

Crater: Louvre F315.

Cylices: Naples SA126; British Museum B443. Two vases.

Total, six vases.

L. Various Onlookers, not included in the above Groups.

Hydriae: Louvre F50; Berlin 1905; Gerhard, *Auserl. Vasenb.*, 138 (now in the Victoria and Albert Museum, London). Three vases.

Celebes: Walters Gallery, Baltimore.

Cylix: Berlin 1800.

Total, five vases.

GRAND TOTAL OF BLACK-FIGURED VASES OF RECUMBENT TYPE.

No Onlookers.	51
In presence of Athena alone.	22
In presence of Iolaus alone.	4
In presence of Hermes alone.	2
In presence of Athena and Iolaus.	38
In presence of Hermes and Iolaus.	2
In presence of Athena and Hermes.	2
In presence of Athena, Hermes, and Iolaus.	12
Vases with local Nymph.	7
Two Onlookers.	8
Four Onlookers.	6
Various Onlookers.	5
<hr/>	
Grand total.	159 vases.

GRAND TOTAL OF BLACK-FIGURED VASES WHICH SHOW THE CONTEST WITH THE NEMEAN LION IN THE NORMAL WAY.

Class I.	106
Class Ia.	24
Class Ib.	9
Class II.	159
<hr/>	

Grand total of black-figured vases. 298 vases.

These 298 vases show the wrestling with the lion in the normal ways. To them a group of abnormal representations must be added, which will be found in another part of the Appendix. The next part of the Appendix will be devoted to the list of red-figured vases which show this exploit of Heracles, in the normal manner.

ADDENDA TO APPENDIX I.

ALL VASES OF RECUMBENT TYPE.

A. No Onlookers.

Add a cylix in the museum of Thebes.

E. In Presence of Athena and Iolaus.

Add two scyphi in the Princeton Museum.

F. In Presence of Hermes and Iolaus.

Add a scyphus in the Museum of Thebes.

Previously listed.	298
Add the above.	4
<hr/>	
Total.	302 vases.

APPENDIX I, PART II

LIST OF VASES SHOWING HERACLES AND THE NEMEAN LION.

RED-FIGURED VASES.

*I. Vases of the Recumbent Wrestling Type.**A. No Onlookers.*

Cylices: Klein, *Meistersig.*, ed. II, p. 100, No. 2 (signed by Euergides); Louvre F128 and G71. Three vases.

Calpides: Louvre G177; Inghirami, *Vasi Fitt.*, I, 63; Bröndsted, *A Brief Description of 32 Painted Vases*, No. 9. Three vases.

Stamnus: Memorial Hall, Philadelphia.

Total, seven vases.

B. Athena Present.

Cylix: Copenhagen, Birket Smith's catalogue, No. 127 (formerly Magnoncour Sale Cat. 33).

Hydria: Magnoncour 45.

Calpis: Vatican (*Mus. Gregor.*, ed. II, vol. 2, pl. 18, 3).

Total, three vases.

C. In Presence of Iolaus Alone.

Cylix: Florence, Archaeological Museum, formerly in Vagnonville Collection.

Total, one vase.

D. In Presence of Hermes Alone.

Cantharus: Boston, Inv. 00.334 (signed by Nikosthenes; formerly in Bruschi Collection, Corneto-Tarquiniæ).

Total, one vase.

E. In Presence of Athena and Iolaus.

Cylix: Naples 2614 (signed ΕΓΘ ΙΕ<ΕΝ).

Amphora: Leipzig (publ. *Jb. Arch. I.* XI, 1896, pp. 182-183, and fig.).

Calpides: British Museum E168; Florence, Inv. 3984. Two vases.

Celebe: Museo Papa Giulio, Rome, Inv. 984.

Total, five vases.

F. In Presence of Hermes and Iolaus.

Cylices: Bologna, *Necr. Fels.* 361; New York, Inv. 06:1021:168. Two vases.

Total, two vases.

G. Vases with Local Nymph.

Stamnus: Munich 415.

Total, one vase.

H. Various Onlookers.

Volute-handled crater: Museum of Syracuse, publ. *Not. Scav.* 1891, p. 412.

Calpis: Würzburg, III, 152.

Cylix: Munich 439 (signed by Pamphaios).

Total, three vases.

GRAND TOTAL OF RED-FIGURED VASES SHOWING THE RE-CUMBENT TYPE.

No Onlookers	7
In presence of Athena	3
In presence of Iolaus	1
In presence of Hermes	1
In presence of Athena and Iolaus	5
In presence of Hermes and Iolaus	2
Vases with Local Nymph	1
Various Onlookers	3

Grand total 23 vases.

II. REVIVAL OF EARLY STANDING WRESTLING TYPE ON LATER VASES.

A. On South Italian Red-figured Vases.

Crater: Naples 2861. (In presence of Athena and a woman, possibly the local nymph.)

Total, one vase.

B. On Relief Vases.

Celebe: Berlin 2882.

"Megarian" bowls: Berlin Inv. 3161g and Brussels, Ravestein 524. Two vases.

Total, three vases.

C. Vases of this Period in the Form of Heracles Wrestling with the Lion.

Used as lecythi (?): Naples SA54; Pollak, *Woodyat Sale Cat.*, No. 158, 5.

Total, two vases.

GRAND TOTAL OF VASES OF THIS CLASS.

South Italian vases	1
Relief vases	3
Moulded vases	2

Grand total 6 vases.

GRAND TOTAL OF RED-FIGURED VASES.

Class I.	23
Class II.	6
<hr/>	
Grand Total.	29 vases.
Total black-figured vases.	302
Total red-figured vases.	29
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Grand total black-figured and red.	331 vases.

It will be seen that no Attic red-figured vases have been found showing the standing wrestling type, an important fact, and one to be remembered in connection with this paper.

APPENDIX I, PART III

LIST OF VASES SHOWING HERACLES AND THE NEMEAN LION.

ABNORMAL REPRESENTATIONS, VASES IMPOSSIBLE TO CLASSIFY,
AND DOUBTFUL VASES.I. *Abnormal Representations.*A. *Black-figured Vases.*

Amphora: Boulogne 63 (fragmentary). Heracles attacks the lion, kneeling on one knee, while the lion stands on three legs, and defends himself with the fourth. At the left is a tree, on which hang the hero's bow and quiver.

Hydriae: Gerhard, *Auserl. Vasenb.*, 94. The lion lies on his back; Heracles puts his right foot on the lion's neck, and kills him with his club, in the presence of Athena and the local nymph. Würzburg, III, 134. A similar representation, except that it is on the shoulder of the vase, while the hydria described above has this as its principal scene.

Total, three vases.

B. *Mixed Technique.*

Amphora: British Museum B193, in the style of, but not signed by, Andokides. The side on which this subject is shown is in the red-figured technique. This vase is publ. *A.J.A.* 1896, p. 10, and figs. 7 and 8, and by Walters, *History of Ancient Pottery*, vol. I, pls. 31, 32.

C. *Red-figured Vases.*

Cylix: British Museum E104. Publ. Murray, *Designs*, etc. No. 62.

Amphora: Vienna, Kunsthistorisches Museum, Cat. Sacken and Kenner, p. 195, No. 64. Publ. Laborde, *Vases de Lamberg*, vol. I, pl. 93 (Reinach, *Rép. Vases*, II, p. 210, No. 2). Seems

to be a modification of the early standing type; but is South Italian, rather than Attic.

Total, two vases.

D. Relief Vases.

Lecythus: Boston, Robinson 464, called by Robinson Heracles and the Nemean Lion, but this has always seemed doubtful. On the vase, in gilded relief, a man attacking an animal with an axe.

Total, one vase.

GRAND TOTAL OF ABNORMAL VASES.

Black-figured.....	3
Mixed technique.....	1
Red-figured.....	2
Relief vase.....	1
Grand total.....	7 vases.

II. Vases which from the Description it is Impossible to Classify.

All Black-figured Vases.

Amphorae: *Monumenti dell'Inst.*, I, pl. 26, 1; *ibid.*, I, pl. 26, 8; Harrow School Museum, Cat. Torr, No. 29; Brussels, Ravestein 289. Four vases.

Lecythi: Madrid 86; Munich, Sale of "Griechische Ausgrabungen," 1910, catalogue No. 59. Two vases.

Vase called in the catalogue "Obba": Brussels, Ravestein 297.

Total, seven vases.

III. Vases Attributed to this Subject, about which there is Doubt.

All Black-figured Vases.

Scyphus: Graef, *Akropolis-Vasen*, 1333.

Oenochoe: British Museum B56.

Lecythus: Athens, Nicole 967. This vase is called a Nemean Lion vase by Nicole (Index, p. 335); but has really nothing to do with this exploit of Heracles.

Fragments: British Museum B600, No. 15.

Total, four vases.

GRAND TOTAL.

Class I.....	7
Class II.....	7
Class III.....	4
Total.....	18 vases.
Previously added.....	331
Grand total.....	349 vases.

The next part of this Appendix will give a list of vases showing Heracles before the combat, approaching the lion, and after the contest is over, preparing the skin of the monster for his own use.

APPENDIX I, PART IV

VASES SHOWING HERACLES BEFORE AND AFTER THE CONTEST WITH THE NEMEAN LION.

I. Heracles Advancing to Attack the Lion.

1. Black-figured Vases.

A. No Onlookers.

Cylix: Berlin 1764.

Lecythi: Petrograd 255, and an unnumbered vase in the Louvre, Room M.

Scyphi: Louvre F167; Athens, Nicole 921; Graef, *Akropolis-Vasen*, 1329; and one in the Museum of Taranto.

Total, seven vases.

B. One Onlooker.

Lecythi: St. Louis Museum (described by Furtwängler, in *Sitzb. Mün. Akad.* 1905, II, p. 243, No. 6); Museum of Taranto (Roscher, *Lexikon*, I, col. 2197, No. 63). The onlooker is Hermes in the vase in St. Louis, Athena in the one in Taranto. Two vases.

Cylix: Graef, *Akropolis-Vasen*, 1389.

Total, three vases.

C. Several Onlookers.

Hydriae: Louvre F46 and F47; Berlin 1895. Three vases.

Amphora: Louvre F107 (signed by Nikosthenes).

Scyphus: Museum of Syracuse, publ. *Mon. Ant.* XVII, fig. 209.

Cyathus: Naples SA130.

Total, six vases.

GRAND TOTAL OF BLACK-FIGURED VASES.

No Onlookers.....	7
One Onlooker.....	3
Several Onlookers.....	6
Total.....	16 vases.

2. Red-figured Vases.

A. No Onlookers.

Cylix (fragmentary): Louvre G72.

Total, one vase.

Total black-figured vases.....	16
Total red-figured vases.....	1
Grand total.....	17 vases.

II. Vases which Show Heracles Preparing the Lion's Skin for Wear, after the Combat.

A. Black-figured Vases.

Cylices: Munich 563; Gerhard, *Auserl. Vasenb.*, 132-133, 1, 2.
Two vases.

Total, two vases.

B. Relief Vase.

Celebe: British Museum G29.

Total for this group, three vases.

Class I.....	17
Class II.....	3

Total in Appendix I, Part IV,.....	20 vases.
Previously noted.....	349

Grand total.....	369 vases.
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There are, therefore, 369 vases known to me that have representations of the combat of Heracles with the Nemean Lion. This proves that this subject bids fair to be the most popular one on record among the Attic vase-painters, especially with the makers of the black-figured period. It proves that the painters of red-figured vases, when they used this subject, always employed the recumbent type. If, as has been suggested in this paper, the New York amphora was painted by an artist who also used the red-figured technique, his employment of the standing type must be considered an archaism.

APPENDIX II

LIST OF VASES SHOWING THE KILLING OF THE STYMPHALIAN BIRDS.

BLACK-FIGURED VASES.

A. Heracles Attacks the Birds with a Sling.

Amphorae: British Museum B163; Boulogne 420; Louvre F387 (the amphora under discussion); and an amphora seen and described by Gerhard (*Annali dell'Inst.* 1831, p. 134, No. 191). Four vases.

Total, four vases.

B. Heracles Attacks with a Club.

Lecythus: Munich 1111.

Scyphus: Scheurleer Coll. No. 393 (in the Hague; Cabirion ware; a catalogue has been published).

Total, two vases.

C. Heracles Shoots the Birds with a Bow.

Lecythus: In the Oesterreichisches Museum, Vienna, publ. *Arch. Anz.* 1892, p. 172, fig. 184.

Total, one vase.

Total black-figured vases, 7.

RED-FIGURED VASES.

A. Heracles Attacks the Birds with a Club.

Amphora: Brussels, Ravestein 302. This is thought by some to be a pygmy fighting a crane, but the man has the attributes of Heracles.

Pelice: In the Louvre, though not in the catalogue. Publ. Reinach-Millin, I, 13. Also thought by some to represent a pygmy fighting a crane. Here, again, the "pygmy" has the attributes of Heracles.

Rhyton: Ruvo, coll. Jatta, 1408, publ. Reinach, *Rép. des Vases*, I, p. 470, No. 3. Although Jatta calls this scene the combat of Heracles with one of the Stymphalian Birds, Reinach is probably right in considering it merely a pygmy fighting a crane.

Unknown form: Tischbein, *Vases d'Hamilton*, II, pl. 18. Total, four vases.

B. Doubtful Vase.

Scyphus: Etruscan imitation of Attic red-figured ware in the Haeberlin coll. near Frankfurt-am-Main, publ. *Arch. Anz.* 1910, cols. 463 and 464, figs. 7 and 8. I do not personally think that this vase has anything to do with the slaying of the Stymphalian Birds, for the birds do not appear; but the man who published the vase thinks so.

Total red-figured vases, 5.

Relief Vase.

Celebe: Berlin 2882. Heracles shoots the birds with a bow.

Total black-figured vases.....	7
Total red-figured vases.....	5
Total relief vases.....	1

Grand total for Stymphalian Birds..... 13 vases.

There are, therefore, only thirteen vases known to me which either actually show this labor, or have been attributed to this exploit of Heracles, and of these thirteen at least four have been disputed, and two of them correctly. This shows the originality of the master of the New York amphora in choosing this subject for the decoration of Louvre F387.

ARCHAEOLOGICAL DISCUSSIONS¹

SUMMARIES OF ORIGINAL ARTICLES CHIEFLY IN CURRENT PUBLICATIONS

WILLIAM N. BATES, *Editor*

220, St. Mark's Square, Philadelphia, Pa.

GENERAL AND MISCELLANEOUS

Barbarian Europe in Early Times.—In *M. Soc. Ant. Fr.* LXXIV, 1914, pp. 90–110, L. JOULIN discusses the early civilization of barbarian Europe, especially central and western Europe. In the eleventh and tenth centuries B.C. bronze was the only metal known. The types of weapons and utensils were the same everywhere, although there were local differences. This had probably been the situation for half a millennium. In Scandinavia, in Hungary and in Italy industry was highly developed, and there was some commerce. After the eighth century a change began which became more rapid in the following centuries. Three peoples had an important part in this development of barbarian Europe, the Greeks, the Celts, who began to work iron in the eighth century B.C. and developed the Hallstatt and La Tène civilizations, and the Romans. In the countries not reached by Roman arms the civilization of La Tène held sway until the great migrations of the third and fourth centuries A.D.

Rock-cut Tombs in Cyprus.—In *Archaeologia*, LXVI, 1915, pp. 159–178 (15 figs.), G. JEFFERY describes the present methods of quarrying in Cyprus which are the same as when iron tools first came into use. The character of the tools used in making the rock-cut tombs is, therefore, of little assistance in establishing their date. The different types of tombs at Tamassus, Paphos, Larnaca and Salamis are described, as well as the rock-hewn chapel of Archeiropoetos at Lambousa.

The Prison of St. Catharine at Salamis.—In *Archaeologia*, LXVI, 1915, pp. 179–194 (2 pls.), J. L. MYRES discusses the evidence for the date of the "Prison of St. Catharine" at Salamis in Cyprus and concludes that this monument was a Graeco-Roman tomb. A report is appended of the excavations on the site in 1913 and the work done to preserve the structure.

¹ The departments of Archaeological News and Discussions and of Bibliography of Archaeological Books are conducted by Professor BATES, Editor-in-charge, assisted by Professor C. N. BROWN, Miss MARY H. BUCKINGHAM, Dr. T. A. BUENGER, Mr. L. D. CASKEY, Professor HAROLD R. HASTINGS, Professor ELMER T. MERRILL, Professor LEWIS B. PATON, Professor A. S. PEASE, Professor S. B. PLATNER, Professor JOHN C. ROLFE, Dr. JOHN SHAPLEY, Professor A. L. WHEELER, and the Editors, especially Professor MARQUAND.

No attempt is made to include in this number of the JOURNAL material published after June 30, 1916.

For an explanation of the abbreviations, see pp. 123–124.

A History of Sculpture.—Professor H. N. FOWLER has published within the compass of a single volume a history of sculpture in the principal countries of the world from the earliest Egyptian dynasties to the present day. The book is intended for the general reader and contains illustrations of the most important monuments. The amount of space assigned to the different sections is as follows: To Egypt, pp. 1-23; to Babylonia and Assyria, pp. 24-40; to Hittite, Persian, Phoenician and Cypriote sculpture, pp. 41-51; to Greece, pp. 53-138; to Etruria, pp. 139-172; to Rome, pp. 148-165; to Byzantine sculpture, pp. 166-172; to Mediaeval sculpture in Italy, France, Germany, England and Spain, pp. 173-256; to Renaissance sculpture in the same countries, pp. 257-345; to modern sculpture, including a chapter on the United States, pp. 346-406; and to the sculpture of the Far East, pp. 407-418. An introductory chapter deals with the materials and methods in sculpture, and a bibliography completes the book. [*A History of Sculpture.* By HAROLD NORTH FOWLER. New York, 1916, The Macmillan Company. xxi, 445 pp.; 195 figs. 8 vo. \$2.]

A History of Classical and Italian Art.—In Fasc. 23-24 of Rizzo and Toesca's *Storia dell'Arte classica e italiana* (Torino, 1916, Unione Tipografico-Editrice Torinese, Vol. III, pp. 385-432; figs. 232-257), Professor P. TOESCA discusses painting and sculpture from the end of the eighth to the eleventh century.

Roman vs. Greek Composition.—In *Burl. Mag.* XXIX, 1916, pp. 21-25, G. F. HILL contrasts the central composition with a dominant frontal figure, "centrolatric" he would call it, so characteristic of Roman and Christian art with the rhythmic free composition of the Greeks and points out that the former was deliberately rejected though known to the Greeks and especially recurrent in their archaic period. It is emotionally more impressive but intellectually less artistic.

Art and Medicine.—In *Burl. Mag.* XXVIII, 1916, pp. 155-158, 192-199, 222-224 (2 pls.; 6 figs.), S. S. SPRIGGE discusses the part which medicine, or more exactly, the representation of medical phenomena has played in art. In general the figurative arts have been more accurate than literature in recording symptoms of disease and have, for example, distinguished unconsciously by the simple exactness of representation the different kinds of epidemic. Historians have regularly failed to do this. Even today word-pictures often fail to be specific. A large field for artists has been the reproduction of diseased members as votive offerings in cases of supposed miraculous recovery. These have been offered to the gods from prehistoric to modern times. The stories of the Bible and of the saints also give countless pathological subjects. The comic and the grotesque are commonly based on medical fact, e.g., Mr. Punch. Piero di Cosimo's panel of the Lapiths and Centaurs has unmistakable representations of acromegaly. Infantilism was a favorite study of Velazquez. Artists do not, however, need any great knowledge of medicine, nor even of anatomy for their work; an accurate eye and hand is better equipment. The chief service of art to medicine has been the contradiction of myths, for a lie easily enough told offers insuperable difficulties of representation and becomes only ludicrous by a literal rendering. A scientific service, too, is the evidence of art, even prehistoric art, that our forefathers shared diseases, casually attributed to modern civilization.

Monstrosities in Art.—In *R. Ét. Gr.* XXVIII, 1915, pp. 288-349 (17 figs.),

W. DEONNA discusses the origin of monstrosities in art and concludes that the exaggeration in size or increase in number of parts of the human body was intended by the artist as an indication of greater power.

EGYPT

The Tomb of Perneb.—In *B. Metr. Mus.* XI, 1916, pp. 31-36 (7 figs.), A. M. L(YTHGOE) gives an account of the tomb of Perneb, a dignitary of the fifth dynasty, about 2650 B.C., which has been transported from Sakkara and reërected in the Metropolitan Museum, New York.

An Inscription of the Sixth Dynasty.—In *C. R. Acad. Insc.* 1915, pp. 551-561 (fig.), A. MORET discusses an inscription of the sixth dynasty from Upper Egypt now at the French Institute in Cairo. About half of it is missing, but this can be restored with the help of other inscriptions. He proves that it gives a chronological account of the life of a certain Daou, vizier of Pepi II, and that the stone came from the tomb erected by Daou at Abydos for his father Chouj.

An Inscription of the Middle Kingdom.—In *C. R. Acad. Insc.* 1915, pp. 368-377, A. MORET discusses an inscription of five lines upon a stele of the Middle Kingdom brought from Edfou by Maspero in 1913 and published by Daressy (*Annales du service des antiquités de l'Égypte*, XV, pp. 207 f). It concerns a certain Beb who engaged in a commercial enterprise with money which he inherited from his father. It probably dates from the eleventh dynasty, about 2000 B.C.

Hike', the God of Magic.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 253-262 (pl.), A. H. GARDINER states that the word *h̄ike'* means "magical arts," "mysterious ways of achieving things," and it is evident that the god Hike' is simply the word "magic" personified. This is quite clearly brought out in a funerary text of the Middle Kingdom, the purpose of which was to enable a dead man to assume the form of the god Hike'.

Ostraca with Colored Sketches.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 23-51 (33 figs.), H. SCHÄFER points out that in ancient Egypt papyrus was expensive, and that for ordinary purposes, such as brief notes, short notices, or even sketches, pieces of limestone, or terra-cotta sherds were used. In 1913 a collection of drawings on sherds was found near the temple of Der el-medine, Thebes. They date from the nineteenth and twentieth dynasties and represent animals, plants, scenes from daily life, gods, the king, foreigners, buildings, etc. The writer catalogues and describes them, ninety-four numbers in all.

The Sign for "Interpreter" in Egyptian.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 246-252, G. JÉQUIER states that the sign for interpreter cannot represent "a vase with drooping ears," and this incorrect expression should be struck out of Egyptologists' vocabularies. In this instance we have a long piece of stuff, relatively narrow, with cords at its upper edge. But, considering its dimensions, it can hardly represent an apron, but rather a cape, or a traveling mantle, attached round the neck and descending almost to the feet. Originally the sign, which at first denoted a special vestment, but was generalized later and applied to all sorts of clothing for men, must have been used solely as an ideogram. As a phonetic it appears as early as the first dynasty, but not so

that we can determine its value; from the commencement of the fifth dynasty it is applied only to the syllable *dāā* "Interpreter," or the title "Chief of the interpreters."

Ptolemaic Seal-Impressions.—A collection of 330 clay sealings which were made to seal papyrus rolls and were baked hard when the rolls were burned, was obtained in Egypt in 1906 and was said with some probability to have been found at Edfou. All of these with the exception of 68 which are distinctly Egyptian in character are described by J. G. MILNE, and many of them illustrated, in *J.H.S.* XXXVI, 1916, pp. 87-101 (2 pls.). Nos. 1-14 are genre subjects; 15-35, Greek mythological; 36-60, Graeco-Egyptian mythological; 61-187, male portraits; 188-213, female portraits; 214-224, grouped portraits. The cartouches among the Egyptian specimens suggest a date as late as Ptolemy X, Soter II, and possibly a close connection with a priesthood of Isis. The portraits are probably royal personages, but as the faces of the later Ptolemies are not well known and the workmanship or condition of the sealings is often very bad, they can be only conjecturally identified.

BABYLONIA AND ASSYRIA

The Sumerian Original of the Descent of Ishtar.—In Poebel's *Historical and Religious Texts*, Pl. XIV, No. 23, is published the reverse of a single column tablet. In *S. Bibl. Arch.* XXXVIII, 1916, pp. 55-59, S. LANGDON discusses this tablet and states that the ends of the lines are broken away, but the fragment reveals the interesting fact that the famous Semitic poem of the *Descent of Ishtar* is really a revision and an expansion of a Sumerian original.

The Land of Nod.—In *S. Bibl. Arch.* XXXVIII, 1916, pp. 6-10, A. H. SAYCE discusses Langdon's discovery of the Sumerian text which contains the story of the Garden of Paradise and the Fall of Man and has shown that the situation of the garden was supposed to be in the country called Dilmun by the Babylonians. Dilmun, as he has pointed out, was on the shore of the Persian Gulf to the southeast of the Edin or "Plain" of Babylonia. One of the names by which Dilmun was known was *Ni-du*. In *Ni-du*, whatever its real origin may have been, the Sumerians would have seen a compound which meant "what is at the end" of the world. Nidu is the Land of Nod of *Gen.* 4:16. The latter was "Eastward of Eden" and, therefore, had the same geographical position as Dilmun.

A Sumerian Epic from Nippur.—In *C. R. Acad. Insc.* 1915, pp. 526-537, V. SCHEIL discusses the tablet from Nippur in the museum of the University of Pennsylvania, published by Professor Langdon under the title *Sumerian Epic of Paradise, the Flood and the Fall of Man*.

Sargon in the Land of the Hittites.—In *S. Bibl. Arch.* XXXVII, 1915, pp. 227-245, A. H. SAYCE discusses a cuneiform tablet found by the German excavators at Tel el-Amarna in the spring of 1914. This tablet contains a legend of the celebrated Babylonian king and conqueror, Sargon of Akkad, which describes his successful invasion of a distant country, separated from the rest of the world by a "barrier" of trackless forests and mountains. This country was that of the Hittites in eastern Asia Minor. The script is that of Boghazkeui; the phonetics and spelling of the Babylonian words, as well as the construction of the sentences and use of ideographs, are also those

of the Hittite tablets, and at the end of the colophon the scribe has added the Hittite *qati*, "I have copied," or "written," as is usually done at the end of the colophons of the native Hittite texts. The house in which the tablet was discovered must have belonged to one of the Hittite residents in Tel el-Amarna.

A Silver Sceptre-Handle.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 52-67 (pl.; 27 figs.), O. WEBER publishes a silver sceptre-handle said to have been found near Sidon and now in Berlin. It is 13.5 cm. high and is decorated with two bands of figures in relief. In the upper band a goddess in the shape of a sphinx is grappling with a figure half man and half fish; and a nude hero stands with one foot on the neck of a bull while he holds up the rest of the animal by the hind legs. In the lower band a monster half man and half bull is fighting a huge dog and Gilgamesh is triumphing over a lion. He has his left knee on the lion's neck and with his left hand holds the hind legs of the beast on high. The art of this sceptre-handle is closely related to that of the Babylonian seal cylinders, and resembles particularly the cylinders of the time of Hammurabi, or about 2000 B.C., at which period it must be dated. The first scene in the upper band may represent a combat between Ishtar and Tammuz. The reliefs show a mixture of Babylonian and western motives. Gilgamesh and the bull and Gilgamesh and the lion are well known; but the sphinx and the hound are western. The story of a fight between Engiddu and the Hellhound may have been included in the Gilgamesh epic. The sceptre represents Syrian-Hittite culture influenced by Babylonian.

Tammuz and Osiris.—In *J.A.O.S.* XXXV, 1915, pp. 213-223, G. A. BARTON states that the parallel between the Semitic god Tammuz and the Egyptian Osiris is most complete. Both were gods of life, and of vegetation; both cults were of wide popularity in different sections; with both there were connected myths of death and resurrection. Were the two cults connected or were they of independent origin? If of independent origin, why did they present so many points of similarity? When one remembers that Isis was a water-goddess, and that Osiris is sometimes a water-god and sometimes a god of vegetation, it seems difficult to escape the conclusion that this pair are developments from primitive Hamitic gods and goddesses of fertility, which in origin and nature were similar to the primitive gods and goddesses of the Semitic peoples. If this be true, Osiris and Tammuz are but special independent survivals and manifestations of a primitive cult once common to both Hamites and Semites. This in our present state of knowledge seems at least a more plausible and historical view than to suppose that the Osiris cult was borrowed from Semites or from Babylonia.

A Tablet of Babylonian Wisdom.—In *S. Bibl. Arch.* XXXVIII, 1916, pp. 105-116, S. LANGDON states that he has been successful in recovering an important part of the double column edition made for the Asurbanipal library and joining to it the Macmillan tablet. The metrical form, strophical arrangement, and ethical content of these proverbs recall at once to our minds the Proverbs of Solomon, the Wisdom of Sirach, and the Story of Ahikar. Since portions of the Assyrian book come from the library of Asurbanipal it was completed before the seventh century at the latest. The text may possibly be as early as Hammurabi. It is doubtful, however, whether a proverb of such lofty ethical standard as that which commands to reward evil with good can be much earlier than the seventh century. "Unto him that doeth evil shalt thou return good. Unto thine enemy justice shalt thou [*mete out*]."

Social Legislation of the Primitive Semites.—In 1912, Dr. HENRY SCHAEFFER presented as his doctor's dissertation at the University of Pennsylvania a study of the social legislation of the primitive Semites. This he has now expanded into a volume in which he discusses in turn matriarchy, patriarchy, agnation, the goël or next of kin, slavery, interest, pledges and security, the social problem as viewed by the prophets, poor laws, Sabbatical year, the year of jubilee, Ezekiel's plan of allotment, taxation and tribute, and the development of individual land ownership in Israel. [*The Social Legislation of the Primitive Semites*. By HENRY SCHAEFFER. New Haven, 1915, Yale University Press. 245 pp. 8 vo. \$2.35 net.]

Two Late Tablets of Historical Interest.—In *S. Bibl. Arch.* XXXVIII, 1916 (2 pls.), pp. 27–34, T. G. PINCHES discusses two late Babylonian tablets of interest. The first tablet, which is dated in the twelfth year of Nabonidus, is in the form of a contract, not a trade-document, but of the nature of those called "sworn obligations." In this case the oath is stated to be that of Nabonidus and Belshazzar, his son. The second tablet differs from that dated in the reign of Nabonidus in not being a "sworn obligation." Nevertheless, it is a document upon the same lines, as it has, to all appearance, a clause imputing a sin—not against the king, but against "Gobryas, governor of Babylon."

SYRIA AND PALESTINE

A Philistine Sword.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 127–129 (fig.), H. R. HALL publishes a bronze sword found at Bêt Dagh, near Gaza, and now in the British Museum. It is a Philistine sword of Shardana type and dates from about 1200 to 1150 B.C. Its length is 1.05 m. and its greatest width 8.5 cm. Its edges are straight, so that the blade has the shape of an isosceles triangle; and there is a strong ridge running down the middle. No other specimen of this type of sword is known. It represents a transition from a thrusting to a striking weapon.

An Incantation Bowl.—In *C. R. Acad. Insc.* 1915, pp. 383–389 (fig.), M. SCHWAB publishes and discusses an incantation bowl in the possession of Professor Pozzi. The inscription in four lines is of some importance for Aramaic palaeography.

ASIA MINOR

A Dedication to Anaïtis.—In *C. R. Acad. Insc.* 1915, pp. 270–276 (fig.), F. CUMONT discusses an inscribed relief found at Kioelnte, near Koula, in ancient Maeonia and now in the museum at Leyden. It was dedicated by a woman named Charite who had been cured of an illness by means of the incantations of the priestess of Anaïtis. Such a priestess is not otherwise known. Anaïtis is represented, like the Ephesian Artemis, with the upper part of her body covered with breasts and with a stag on either side of her. Above is a standing figure of the sun god Men. Men and Anaïtis preserve the tradition of the Iranian pair, Mithra and Anahita. The relief probably dates from the end of the second century A.D.

The Ionian Confederacy.—In *J. H.S.* XXXV, 1915, pp. 173–188, M. O. B. CASPARI discusses some of the problems in the history of the Ionian League. The founding, probably due to the need of united action against the Aeolians,

was certainly earlier than the date of the Cimmerian invasion (650 B.C.) and than that of the Hymn to Apollo (seventh or eighth century) which mentions the later Ionic festival at Delos; but it can be only vaguely set as between 900 and 700 B.C. The purpose of the continental league with its meetings held at Mycale was from the beginning political, while that of the festival at Delos was religious. The number of members was at first fluctuating, but in the time of Herodotus it was understood to be fixed at twelve, and after the founding of New Smyrna ca. 300 B.C. it was thirteen. The nature of the deliberative council and the means of enforcing its decrees in early times are not known, but after a period of comparative inactivity during the Lydian aggressions, a need of a more centralized administration was felt at the time of the Persian invasion of western Asia Minor, and a reorganization of the League was made by which the cities which were members surrendered their power of making war and treaties to a central body meeting at Teos and assumed the relation of demes to a polis. The League took some measures of defence at the time of the Ionian revolt, but after the Persian wars it was superseded by the Confederacy of Delos under Athenian hegemony. There was a brief period of revival about 400 B.C. and another under the Diadochi which lasted until the conquest by Sulla in 85-84 B.C., but it had now a purely sacral and formal character, administering the festival at Mycale and depending wholly on the great territorial kings. It existed also in the reigns of Augustus, Domitian, Antoninus Pius and Septimius Severus, but served merely as a means of holding a festival as a form of amusement. The evidence on these points is found chiefly in inscriptions and in the Greek historians. *Ibid.* XXXVI, 1916, p. 102, attention is called to the evidence of coins for the nature of the league at the time of the Ionian revolt. Nine or ten Ionian cities at that time issued electrum coins with an identical reverse type and on the same standard of weight, but these are not a federal coinage and only prove a sort of *entente* among the Ionian towns.

Measures of Capacity at Pergamon.—Three jars (*πίθοι*) from Pergamon, marked as containing respectively 26, 27, and 28 "measures" (designated by an abbreviated A, either for *ἀμφορείς* or *ἀράβαι*) together with an inscription from Patmos which gives the ratio of the Pergamene to the Attic cotyle as 12:7, form the basis for a calculation of the volume of the Pergamene liquid measures and the weight of their contents in Roman ounces. The Pergamene cotyle of oil weighed one pound (*λίτρα*) of 12 ounces, or 96 drachmas, at 8 drachmas to the ounce. The large *μετρητής* or amphora contained apparently 96 cotylae (12 cotylae=1 chous, 8 choes=1 amphoreus, as in Ptolemaic wine measure). These measures are by the Phoenician-Ptolemaic standard. The Attic cotyle is to be reckoned as containing .2265 modern litres, or a water weight of 226.5 grams. This, with a more accurate ratio than the 12:7, in which a small fraction was thrown out, gives the volume of the Pergamene cotyle as .3865 litres, and the largest of the three jars should contain $28 \times 96 \times .3865$ litres, or 1043.75 litres, which is as close to the actual volume by measurement, 1061 litres, as the practical necessity of not filling to the very edge would allow. The weight of this volume of oil is to be reckoned at 9:10 of the weight in water. (O. VIEDEBANTT, *Arch. Anz.* 1915, cols. 137-142; fig.)

Inscriptions of Rhodes.—In 'Αρχ. 'Εφ. 1915, pp. 128-131, M. D. CHAVIARAS

publishes seventeen inscriptions from Rhodes. The most important is evidently a list of naval officials, not earlier than the first century B.C. The names in the first column, at least, are alphabetized by their initial letters. The titles 'Ἀρχιναυφύλαξ, Φύλαξ, Καθήμενοι (members of admiralty court) occur.

Coinage of Chios.—In *Num. Chron.* 1915, pp. 361-432 (2 pls.), J. MAVROGORDATO proceeds with his chronological arrangement of the coins of Chios, taking into account in this second part Miss Agnes Baldwin's article on the electrum and silver coins of Chios during the sixth, fifth, and fourth centuries B.C., published in *A.J. Num.* The work is to be continued.

GREECE

SCULPTURE

Two Bronze Figures of Athletes.—Two small bronze figures of athletes (height about 20 cm.) probably from *lebetes*, were found on the Acropolis to the south of the Parthenon and are in the Epigraphical Museum at Athens. They represent momentary poses in the throwing of the discus; one is position 2 in E. N. Gardiner's analysis of this action (*J.H.S.* XXVII, 1907, p. 16; *A.J.A.* 1907, p. 469), the other and finer figure is a transition from between positions 3 and 4, which last is that of Myron's Discobolos. The small bronzes are in more than one sense a transition to this work. In style, as seen in the treatment of the hair, the abdominal muscles, the thigh, etc., they are distinctly Attic, parallel to the art of red-figured vases, and they show how the problems preliminary to Myron's apparently isolated achievement were worked out on an humbler scale. Like the larger statue, they render the "mechanism and organic action" of the body, without "character or emotional expression." (H. G. E. WHITE, *J.H.S.* XXXVI, 1916, pp. 16-24; 2 pls.; 3 figs.)

The Barberini Suppliant.—In *J. Int. Arch. Num.* XVI, 1914, pp. 255-278 (pl.; fig.), I. N. SVORONOS argues that the Barberini "Suppliant," which resembles the figure identified by him as Procris on the crater of the Medici, (see p. 485) is in reality a statue of Callisto, slain by Artemis beside her new born son Arcas. The statue is reproduced on coins of Orchomenus and Methydrium in Arcadia from about 370 B.C. It has been recognized as an original work of the latter part of the fifth century B.C. and Svoronos believes that it is the Callisto of Deinomenes which Pausanias (I, 25,1) saw on the Acropolis at Athens.

Amazon Studies.—In *Jb. Arch. I.* XXX, 1915 (pp. 131-179; 5 pls.; 9 figs.), F. NOACK publishes anew the Amazon relief from Ephesus, now at Vienna, which probably formed part of the decoration of the great altar of Artemis, and also the Copenhagen replica of the Amazon statue at Ephesus, the best-known copy of which is in Berlin. In this connection he discusses the three famous Wounded Amazons of Ephesus known as the Capitoline, Mattei (Vatican) and Berlin types, making an especial study of the draping of the tunic and comparing the attitudes and positions of the figures by means of ingenious horizontal and vertical contours. These contours, compared also with those of the Doryphoros and Diadoumenos, show that the Capitoline or Sosicles type, in which the figure wears a mantle over the peplus and leans

slightly forward, is in the Peloponnesian manner and indeed from Polyclitus himself. The Berlin-Lansdowne type, of which the relief is an adaptation, is the one in which the figure leans on a support under the left elbow and raises the right hand to rest on the top of the head. With its somewhat precise arrangement of draperies, in four groups of vertical folds, and the intentional display of the forms of the body, it is markedly Ionic-Attic in character and may be conjecturally identified with the Eucnemon (beautiful-legged) Amazon of Strongylion, an artist associated with Cephisodotus and Praxiteles. The absence of the wound under the right arm in the relief shows that this illogical feature, which occurs in all the statue replicas, does not go back to the bronze original. The Mattei type, with wound in the left thigh and leaning heavily on a spear at the left, may be traced back to a conjectural original, perhaps in a Polygnotan fresco group, of the great period after the Persian wars. This original established so strong a precedent for the attitude of a wounded warrior that it appears, even to the wearing of the Amazon's double-girded tunic, in a picture of Aeneas at Pompeii. The bold position of the right arm, passing over the top of the head to grasp the upper part of the spear on the left side, is, however, original with the artist of the Ephesus statue.

The Sculptures of the Later Temple of Artemis at Ephesus.—In *J. H. S. XXXVI*, 1916, pp. 25–35 (7 figs.), W. R. LETHABY presents some additional notes on the sculptured pedestals and column-drums of the fourth century Artemisium at Ephesus (see *ibid.* XXXIII, p. 87; XXXIV, p. 76; *A. J. A. XVII*, 1913, p. 541; XVIII, 1914, p. 187) and adds a summary of the general design of the temple, architectural and sculptural, based on the closely related evidence of inscriptions and existing remains. Apparently the covered part of the temple was the pronaos, a large hall in which the temple treasures were kept and where meetings were held, while the main sanctuary was open to the sky and the wooden ceiling was over the side aisles. As at Priene, the Mausoleum, the Nereid Monument, etc., the traditional Ionic order without frieze was followed. The general scheme of the decoration was probably suggested by that of the Parthenon and was related to the great festival of the goddess, held on her birthday in May, as that of the Parthenon was related to the Panathenaic festival. The square pedestals or bases belonging to the piers which formed the outer row of supports at the west end or front of the temple, and the lower drums of the round columns which formed the inner row here, were sculptured with the Labors of Heracles, and the Adventures of Theseus, the members at the ends of these two rows having respectively Victories leading animals to sacrifice and people bringing gifts. At the rear or eastern end there were only round columns, and the sculptured drums had groups of the Muses, Apollo, Artemis and Leto, possibly other gods and goddesses and attendants, and at the ends, priestesses putting up garlands for decorations and the assembling citizens. Thus the whole scheme showed the deeds of the two great Greek heroes and a festival of Artemis. The columns at the sides were probably plain. The pedestal sculptures include Heracles and Antaeus, the earliest example of a grouping which became typical for this scene; Heracles and Omphale; Heracles in the garden of the Hesperides; probably Heracles and the Cerynian stag, with Artemis giving a warning signal; Heracles and a Triton, and Nereids riding hippocamps, these last two subjects evidently designed by Scopas, the author of other famous marine subjects. To the west end belong also the Rescue of Alcestis from Hades and

a Theseus and Sinis. A procession of priests in Persian dress is perhaps the prototype in art of the Wise Men of the East. Among the Muses are several figures which were or became typical for certain of their number, notably a standing Polyhymnia. The draperies show a Phidian tradition. A fragment of a sheep's head may come from the temple dedicated by Croesus. A fifth-century lion's head and some fragments of a colossal female figure or figures are perhaps from a large cult image or votive statue of the *πότνια θηρών*.

The Nereid Monument Re-Examined.—Any exact restoration of the Nereid Monument from Xanthus is made difficult by the fact that the backs of the heavy slabs were sawed off when they were transported to England some seventy years ago and so much of the structural evidence was destroyed, but a new and careful study of the dimensions and subjects of the blocks of the various friezes together with the dimensions of the substructure that remains, leads to certain definite conclusions. The monument was in the form of a temple with cella and peristyle, raised upon a high podium or base measuring about 33×22 ft. but inclining slightly inward, as columns decrease toward the top. Around this podium ran two sculptured friezes, the lower being wider than the upper, their backgrounds flush with the masonry below. The narrow frieze, which lacks only three blocks out of twenty-two, has scenes of battle, siege and surrender. There was a third frieze on the epistyle, with hunting and battle scenes, and still another around the cella, which had a funeral banquet and a sepulchral sacrifice at the two ends, and at the sides, scenes of feasting and a battle with Victory. The cella was recessed in antis at the entrance end and probably finished with two pilasters at the other end. While the influence of the Parthenon and the Erechtheum is evident in the design of this monument, its closest relations are with other Lycian works of the fourth century and with the Sidon sarcophagi, especially the Alexander sarcophagus. The composition of the narrow frieze of the podium is an attempt to reproduce the effect of painting. (W. R. LETHABY, *J.H.S.* XXXV, 1915, pp. 208-224; 3 figs.)

The Eros of Motye.—A small terra-cotta head found in 1871 on the site of Phoenician Motye, the little island of San Pantaleo off the west coast of Sicily, is published by H. THIERSCH in *Jb. Arch. I.* XXX, 1915 (pp. 179-192; pl.; 5 figs.). Although somewhat injured by a mistaken method of cleaning, it is intact even to the tip of the nose, and is one of the finest of Sicilian terra-cottas. It is a Greek work of the transitional severe style, to be dated about 470 B.C. or a little earlier, and is the earliest known plastic representation of the god of love. The hair is smooth above the band and arranged in a deep fringe of curls below, which cover the forehead, ears and back of the neck, and there are indications, at the fracture at the back, of a pair of high-set wings. The nearest analogies are found in Sicily, in coins of Eryx and Segesta, a metope from Selinus, etc. The statue to which the head belonged doubtless stood in a shrine or small temple of the Greek colony in Motye, subsidiary to the great sanctuary of Aphrodite at near-by Eryx.

The Eros of Lemnos.—In *R. Arch.*, fifth series, III, 1916, p. 157 (cut), S. R. (EINACH) publishes a cut of the Eros found at Lemnos in October, 1915, and a cut of the Eros Bending his Bow in the Louvre, showing that the newly found torso is a replica of the well-known type.

The Alexander of Cyrene.—In *R. Arch.*, fifth series, III, 1916, pp. 169-183 (fig.), ADA MAVIGLIA discusses the statue of Alexander found at Cyrene in

1914. She thinks the figure held a sceptre in the right and a cornucopia in the left hand. It represented Alexander-Helios. The horse's head beside the statue indicates the sun thought of as a rider. Alexander identified himself in Egypt with Amon-Ra, the sun god. The bronze original of this statue was probably by Lysippus. Its somewhat Polyclitan aspect is due to the fact that it was a temple statue. The bronze from Rheims, in the Cabinet des Médailles, is a fusion of an Alexander-Zeus and an Alexander similar to the Poseidon of Melos, that is to say, the Alexander with the lance.

The Marble Crater of the Medici.—In *J. Int. Arch. Num.* XVI, 1914, pp. 215-254 (3 pls.; fig.), I. N. SVORONOS argues that the scene on the marble crater of the Medici at Florence represents Cephalus on trial before the court of the Areopagus for having accidentally killed his wife Procris. The two stones are the stones of *hybris* and *anaideia*. The plaintiff is Erechtheus. On the ground, before the statue of Athena Areia, is the dying Procris. The judge is Ares. Behind Cephalus are Amphitryon, Panopeus and Helios. He argues further that the scene on the vase is an incomplete copy made in imperial Roman times of a neo-Attic original which contained figures of Boutes, Praxithea, Procne, Philomela and Pandion behind Erechtheus. The evidence for this is to be found in a relief discovered by Amelung in Italy (see *Röm. Mitt.* 1909, p. 189). The original relief was probably the work of the later Praxiteles.

Alexandrian Bone Reliefs in the National Museum at Athens.—In 'Αρχ. Έφ. 1915, pp. 138-145 (10 figs.), A. XYNGOPOULOS publishes the five specimens of small, bone reliefs in the Egyptian collection of the museum at Athens. Such reliefs have been found in large numbers in cemeteries about Alexandria. They are important as exhibiting prototypes of elements in later art, especially Byzantine. Of the five specimens in Athens two represent a Nereid, two a dancing girl, and one a standing nude man. They date from the third or fourth century after Christ. The Nereid type, especially, with the bowed folds of the mantle forming a background for the nude figure, had a wide influence, traced in Hellenistic, Buddhist, and Byzantine art.

Athena and Vajrapani.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 174-180 (5 figs.), A. GRÜNWEDEL points out that the type of Athena Promachus with the thunderbolt in her right hand and the shield on her extended left arm which was found by Stein on seals at Niya, Chinese Turkestan, also appears occasionally on Indo-Scythian coins. These were copied from earlier coins. A type of Vajrapani with helmet and thunderbolt may be derived from this archaic Athena.

Eros with a Mask of Silenus.—In *R. Arch.*, fifth series, III, 1916, pp. 74-97, W. DEONNA contributes, as the first of a series of 'Notes Archéologiques,' an article on Eros with the mask of Silenus. Masks have a symbolic connection with the future life, and the mask of Silenus, like other Bacchic symbols, is connected with the Dionysiac mysteries. The Erotes playing with the mask of Silenus have a profound symbolic sense. The mask is that of the infernal Silenus, whom Roman art received perhaps from Greece through the Etruscans. The mask seems to have devoured the Eros who carries it, and to have left nothing of him except his hand, which sometimes holds the chthonic serpent. Other Erotes gaze with terror and submission upon this visitor from the world below. The article contains many observations upon the religious attitude of the Greeks in the Hellenistic period.

Anthropometry of Greek Statues.—Ancient sculptors, Egyptian and Greek, in constructing the human figure, must have based their work not on the mere perceptive faculty of the eye without conscious calculation, but on definite systems of numerical ratios, which were traditional and which varied with different schools, as the early Attic, Polyclitan, Lysippian and Praxitelean. That such canons existed is known from Vitruvius and other writers, and is also to be inferred from the close resemblances within such groups or schools. Many later great artists have believed this and have tried to reconstruct such a system, notably Leonardo da Vinci and Albrecht Dürer, but not until recently has a sufficient amount of material in observed and recorded measurements been collected to serve as a basis for any complete study. An understanding of the exact facts with which one is working, as distinguished from the aesthetic perception, is the *ἀναλογία* of the Greeks, a no less necessary factor in producing a true work of art than the more highly esteemed *συμμετρία* and *εὐρυθμία*. The systems of the ancients must have been based on geometric ratios, as they had no other instruments of precision, such as millimetre scales and squared paper, by which calculations could be easily transferred from one figure to another of a different height. They probably worked largely with the ratios of the sides of polygons inscribed in circles (hexagon or radius, pentagon, square, triangle) together with the heights of these figures, which would all vary automatically when any one was changed. Nature herself seems to have used some such simple proportions in fashioning the human body. Two extremely useful studies have already been published, by A. Kalkmann on the proportions of the human face in Greek statuary and by G. Frisch on the human figure. Anthropometry may now be considered an exact science. In *J.H.S.* XXXV, 1915, pp. 226–259 (3 pls.; 19 figs.), a typical design has been made by F. W. G. FOAT, from data of the widest possible range, to serve as a universal basis for recording the facts of any figure that may be examined, either the living body or a statue, and it is hoped that patient study of such facts on a vast scale may lead to the re-discovery of the Greek system or systems. Mr. Foat's scheme permits the exact designation of any point in the figure when standing erect, by the method of orthogonal projection on three planes at right angles to one another, as in solid geometry,—a principal or median plane bisecting the body exactly from front to back, a transverse plane passing through the shoulder, hip, knee and ankle joints of both halves, and the horizontal plane on which the figure stands. Any point can be exactly located by three numbers giving its perpendicular distance in millimetres from each of these planes. When the prejudice against any mechanical methods in art is overcome, these "elevations" of a statue will be found to be as useful to the artist as the elevations and plans of buildings are to the architect.

The Painting of Plaster Casts.—In *Museumskunde*, XI, 1915, pp. 193–198, B. DAUN discusses the painting of casts of ancient sculpture, and advises caution, lest the painted cast give a wrong impression of the original.

VASES] AND PAINTING

Northern Influence in Mycenaean Vase-Painting.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 155–173 (22 figs.), C. SCHUCHHARDT shows that a type of decoration consisting of vertical lines with cross strokes between them either in the shape of triangles, or in some other shape, existed in central Europe

in very early times. This is found in many variations in Mycenaean vase-painting. It was common in Bohemia, Moravia, Carniola and Slavonia, whence it gradually made its way south. It was known along the Danube and in Thessaly in the Stone Age, in Sicily in the Copper Age, in Mycenae in the Bronze Age, and in Cyprus and along the Syrian coast somewhat later.

The Date and Origin of Minyan Ware.—The material for the study of Minyan ware and its connections has been so much increased since the publication of Forsdyke's article (*J.H.S.* XXXIV, 1914, pp. 126 ff.), by excavations on several sites in Phocis, that it is now possible to settle some points more definitely. It seems probable that the Trojan influence which has been noted in this gray ware of Boeotia and Phocis indicates an interaction through the medium of the northern Cyclades rather than an invasion or conquest from either side or any extensive importation. The Minyan ware of Central Greece was made at home, and its advent may be assumed to be about contemporary with Middle Minoan II of the Cretan epochs. (V. G. CHILDE, *J.H.S.* XXXV, 1915, pp. 196-207; 5 figs.)

Black-Figured Cylices from Rheitsona.—In *Ἀρχ. Ἐφ.* 1915, pp. 114-127 (25 figs.), P. N. URE publishes the series of black-figured cylices found in graves excavated at Rheitsona (Mycalessus) in 1907-8 (cf. *B.S.A.* XIV; *J.H.S.* XXIX), with a very careful study and definition of the different styles, based upon personal inspection of a great number of specimens in many of the museums of Europe. Six types, four of them subdivided into two groups each, are distinguished, dating from about 550 to about 450 B.C. Types C and D are more definitely dated by the help of the Rheitsona excavations.

A Black-Figured Amphora.—In the *Museum Journal* of the University of Pennsylvania, V, 1915, pp. 169-172 (5 figs.), S. B. L(UCE) discusses a small black-figured amphora, 29.3 cm. high in the museum of the University of Pennsylvania. In panels on the sides are scenes representing boxing and discus throwing. The shape suggests that it is the prototype of the "Nolan" amphora.

Black-Figured Bowls.—In the *Museum Journal* of the University of Pennsylvania, V, 1915, pp. 173-179 (5 figs.), Mrs. E. H. D(OHAN) publishes four covered bowls from Orvieto in the museum of the University of Pennsylvania.



FIGURE 1.—SCENE PAINTED ON A BOWL FROM ORVIETO

The shape is unusual. The decoration consists of bands of figures in black representing youths and maidens conversing, maenads and satyrs dancing, seated divinities (Fig. 1), horsemen, warriors and athletes.

A Psycter by Euthymides at Turin.—The missing psycter signed by Euthymides which formerly belonged to Signor Bazzichelli at Viterbo has been found in fragments in the museum at Turin and is published by J. C. HOPPIN in *J.H.S.* XXXV, 1915, pp. 189–195 (2 pls.; 3 figs.). On either side of the vase is a pair of youths wrestling, with their names and with the artist's signature. Those on the obverse are apparently Theseus and Cercyon, and those on the reverse Phayllus and Olympiodorus, but the second name in both pairs is made uncertain by breaks. Certain mistakes and irregularities in inscriptions and contours may be the work of apprentices, but the characteristics in general are those of Euthymides, especially the congratulatory exclamation $\epsilon\upsilon\chi\epsilon\ \nu\alpha\lambda\chi\iota$ on the obverse. It is to be dated in the decade 500–490 B.C.

A Hydria by the Painter of the Berlin Amphora 2160.—In *Burl. Mag.* XXVIII, 1916, pp. 137–138 (2 pls.), J. D. BEAZLEY adds another to the list of works attributed by him to the painter of the Berlin amphora No. 2160. This is a red-figured Attic hydria of about 480 B.C., found at Vulci, now No. 628 in the Hermitage. The subject depicted is the meeting of Achilles and Polyxena at the fountain.

Glazed Vases in the Metropolitan Museum.—In *B. Metr. Mus.* XI, 1916, pp. 64–68 (10 figs.), Miss G. M. A. R(ICHTER) describes the Graeco-Roman vases of terra-cotta with a "metallic" glaze in the Metropolitan Museum, New York. There are eight specimens in addition to those loaned by Mr. Morgan. The vases were usually made in moulds with the decoration in relief, but in one type the reliefs were of white clay added to the body of the vase. The influence of metal work is apparent. The specimens in New York date from the first century B.C. to the first century A.D.

The Paintings of Panenus and the Throne of Zeus at Olympia.—In *Atti del Reale Istituto Veneto di scienze, lettere ed arti*, LXXIV, 1915, pp. 1555–1574

(fig.), G. PELLEGRINI discusses the location of the paintings of Panenus in the temple of Zeus at Olympia. The theories proposed by Brunn, Gardner and Murray, with the modifications suggested by other writers, are shown to be unsatisfactory. Pellegrini argues that the four columns were placed under the throne of Zeus, that these columns were connected by partitions, and that other partitions ran from the columns to the legs of the throne (Fig. 2). Thus there were twelve surfaces for paintings. The three in front were painted blue, while the others were decorated with figures. Such an arrangement agrees well with the words of Pausanias.

Protagenes as a Painter of Ships.

—According to Pliny, *N.H.*

XXXV, 88, Protagenes, the great painter of Caunos was forced to paint ships (*pingere naves*) until he was fifty years old in order to support himself.

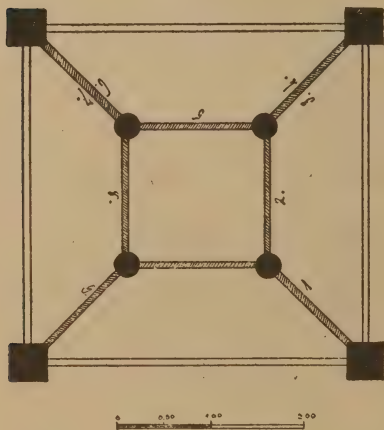


FIGURE 2.—SUGGESTED ARRANGEMENT OF THE PAINTINGS BY PANENUS

A similar story was told of a later painter, Heraclides of Macedonia (*ibid.* XXXV, 135). In *R. Ét. Gr.* XXVIII, 1915, pp. 282-287, A. DE RIDDER argues that what these men really did was to paint pictures of ships which were dedicated in temples by sailors as offerings for a safe return.

INSCRIPTIONS

Prehellenic Inscriptions of Thessaly.—In 'Αρχ. 'Εφ. 1915, pp. 97-114 (6 pls.; 34 figs.), N. I. GIANNOPOULOS publishes thirty-four small articles found in different places in Thessaly, bearing characters and designs which he believes to be prehellenic. The articles are stone spindle-weights, seals of terra-cotta and stone, seal-rings of bronze and of silver, and a terra-cotta disk. Numerous parallels are found to the "Minoan" writing of Crete, discussed by Evans and the Italians, and a comparative table of the characters is appended. The editors of 'Αρχ. 'Εφ., in a foot-note, express doubt as to the prehistoric status of these finds, some of which they think may be "Christian" and of later date.

Inscriptions from the Sporades.—In 'Αρχ. 'Εφ. 1915, pp. 131-133, N. D. CHAVIARAS publishes twelve inscriptions from the Sporades, including one which testifies to the existence of a shrine of Aphrodite in Syme, one which fixed boundaries of property in Patmos, and a decree in honor of an official in Lepsia.

An Attic Decree of 368-7 B.C. and the Festival of the Lenaea.—Dionysius of Syracuse, according to Diodorus, died from the effects of a debauch in celebration of his victory with a tragedy at the Athenian Lenaea in 368-7 B.C. Two months after the Lenaea, in the month Elaphebolion, he made a treaty with the Athenians, *I. G.* II, 52 (*Ed. Min.* 105), if we are to accept the restoration of Kirchner. A more correct restoration would date the treaty between the 15th and the 19th, probably the 18th or the 19th, of Gamelion. Attic decrees give dates that are *not* holidays, and a consideration of this fact, together with the other evidence, makes it probable that the Lenaea were celebrated in the fifth century on the 19th, 20th, and 21st of Gamelion, in the fourth century perhaps on the 22nd also. Therefore it is probable that Dionysius made the treaty with Athens on the day before the festival in which he won the victory. (K. MALTEZOS, 'Αρχ. 'Εφ. 1915, pp. 135-137.)

The Twentieth of Boëdromion.—Two Attic decrees, *I. G.* II, Suppl. 373 d (*Ed. Min.* 799) and *I. G.* II 303 (*Ed. Min.* 768), have caused difficulty by being apparently dated on the 20th of Boëdromion, one of the days of the Eleusinian festival during which the Ecclesia did not meet. This difficulty is overcome by a more correct restoration of the dates of the inscriptions by K. MALTEZOS, 'Αρχ. 'Εφ. 1915, pp. 137 f.

The Decree of Lampsacus and the Galates Tolostoages.—In *R. Ét. Anc.* XVIII, 1916, pp. 1-11, M. HOLLEAUX shows that in the decree of the people of Lampsacus in honor of Hegesias and the other ambassadors to Massalia and Rome in 196 (*Ath. Mitt.* 1881, pp. 96 ff.; Dittenberger, *Sylloge*,² No. 276), the Galates Tolostoages are referred to but once; that they never attacked Lampsacus; and that the decree merely shows that the Massaliotes were on good terms with them and that the people of Lampsacus could live at peace with them to their advantage.

Greek Epigraphy in 1914-15.—M. N. TOD's list for the year 1914-15, of articles in periodicals and other publications in English, French, German, Italian and Greek, that deal with Greek inscriptions or are based largely on

such epigraphical material, is given, with brief comments or summaries of the more important, in *J.H.S.* XXXV, 1915, pp. 260-270. Among the larger works are Favre's *Thesaurus* of Ionic inscriptions compared with the language of Herodotus; the first part of a grammar of Delphian inscriptions by E. Rüschi; a collection of 177 texts from southern Asia Minor, chiefly Pamphylia, and one of 61 from Gonnai in Thessaly; the epigraphical appendices to J. L. Myres's *Catalogue of the Cesnola Collection in the Metropolitan Museum*, including Cypriote, Greek, and bilingual inscriptions; and a study of the Sacred Houses at Delos. To be noted also are: some new fragments of the building records of the Parthenon and the accounts for the gold and ivory Athena of Phidias; an Amphictyonic decree concerning the reëntance of the Thessalian Confederacy and the restoration of the old Council in 186 B.C. (not 190); an inscription of Aspendus which proves that the Ptolemaic rule once extended to Pamphylia; fragments of a treaty between Tylissus and Cnossus mediated by Argos in the middle of the fifth century B.C., from Gortyna.

A Bulletin of Greek Inscriptions.—In *R. Ét. Gr.* XXVIII, 1915, pp. 446-475, P. ROUSSEL publishes a bulletin of the Greek inscriptions discussed, and of the works relating to Greek inscriptions published during the year 1914.

COINS

The Decadrachmas of Cimon.—In *Ber. Kunsts.* XXXVI, 1914, cols. 3-11 (4 figs.), K. REGLING discusses the decadrachmas of Cimon, dividing them into these classes: 1. Those having on the obverse the signature $\begin{smallmatrix} \text{KI} \\ \text{M} \end{smallmatrix}$ on the head-band (die α); 2. those having KIMQN on the lowest dolphin (die β); 3. those with K on the head-band and KIMQN on the dolphin (die γ); 4. again those having KIMQN on the dolphin (dies δ and ϵ); 5. those having KI on the head-band (die ζ); 6. those without signature (dies η to ν). He makes three classes for the reverse. 1. The coins with the signature KIMQN on the line of the ground (die A); those unsigned on the reverse (die B); and 3. those signed $\begin{smallmatrix} \text{I} \\ \text{M} \end{smallmatrix}$ above the first horse (die Γ). Regling differs somewhat from Evans in regard to the chronology of the coins. He classifies the eighty-seven decadrachmas of Cimon known to him.

Coins of Catania and Syracuse.—A tetradrachm of Catania with the signature $\Pi\text{POK}\Lambda\text{H}\Sigma$ and another of Syracuse with χ (Kimon?) add a third and a second respectively to known examples of these types. (G. DE CICCIO, *Num. Chron.* 1915, pp. 357-360; 3 figs.)

Some Cypriote "Alexanders."—In the British Museum Catalogue of Cypriote coins, G. F. HILL published a single Alexander tetradrachm (Paphos mint) and a few bronze pieces of the same monarch (Salamis mint). In an article in *A.J.N.*, 1912 ('Reattribution of Certain Coins of Alexander the Great'), E. T. NEWELL ventured the statement that two series sorted out by him from the great hoard of "Alexanders" discovered near Demanhur in Egypt were to be ascribed to "some district not far from the north-east corner of the Mediterranean Sea." He now assigns them confidently to Citium and Salamis, and localizes in Cyprus other "Alexanders." (*Num. Chron.* 1915, pp. 294-322; 4 pls.)

GENERAL AND MISCELLANEOUS

The Crew of an Athenian Trireme.—Some fragments of an inscription from the Acropolis, most of which are in the Epigraphical Museum at Athens, contain lists of names in columns, arranged under the titles and classes to which the men belonged as members of the crews of triremes. It is not possible to determine the original extent of the document, or whether it consisted of one or more stones, and the date is only approximately to be set at about 400 B.C., but much can be learned of the numbers and character of the various services on board such a ship, *e.g.*, what classes were open to metics, foreigners and slaves, and whether the citizen members were taken by demes, by tribes or otherwise. The list of a single crew seems to consist of two commandants, ten marines, one helmsman, one boatswain (κελευστής), one *pentecontarch*, and usually a flutist, a shipwright, and a look-out man (πρωράτης), with at least sixteen citizen sailors and a certain number of slaves. The sailors of foreign nationality do not expressly appear on the existing fragments. (J. SUNDWALL, *Arch. Anz.* 1915, cols. 124–137; facsimile.)

The Greek House.—In *Festgabe für Hugo Blümner* (Zurich, 1914), pp. 186–209 (8 figs.), E. PFUHL publishes a study of the different types of house in prehistoric Greek times, as seen at Tiryns, Arne, Melos, etc., and traces their development. The Greek house of classical times developed from the megaron type with rooms added to the court.

The Commerce of Sinope.—In a presidential address before the Hellenic Society in June, 1914, W. LEAF referred to the British tradition of combining sound classical learning with active business life, especially as exemplified in George Grote, and to the importance of commerce and finance as factors in Greek history itself. He suggested that a commercial history of Greece was much to be desired, and that, as a beginning of this work, a very thorough and many-sided study of the three books of Strabo (XII–XIV) which deal with Asia Minor, should be made by certain experts, with the coöperation of the Society as a whole. A year later, when this work, entrusted to a special committee, had actually been begun, his address was a contribution to this project, on the commerce of Sinope. The current idea that Sinope, the most important of the Greek commercial colonies on the Black Sea, owed its importance to its connection with the interior of the country especially as the terminus of a caravan route, is entirely false, and the proofs of this are abundant, both in ancient writers (especially Xenophon, *Anab.* V, and Strabo, XII, 3) and in the statements of modern travellers and geographers. Not only is Sinope shut off from the interior by impassable mountains, but there never has been even a coast road connecting it with other inhabited places east or west. Its trade was entirely water-borne. Lying almost exactly in the middle of the southern coast of the Euxine, possessing the only natural harbor on that coast and that a large and secure one, it was the natural emporium or port of exchange for this whole region, so rich in minerals, forests, fisheries and slaves. The produce of the other coast towns and the districts they served was brought together here by small coasting vessels and reexported in larger vessels to other cities and countries. Among the large places within a radius of 400 miles were Cyzicus, Byzantium, Odessus (modern Varna), Olbia (modern Odessa), Panticapaeum

and Phanagoria at the entrance to the Sea of Azof, Dioscuriae and Phasis at the eastern end of the Black Sea, besides Trapezus, Cerausus, Cotyora, Amisus and Heraclia, east and west on the same southern coast. Emporia for such concentrated trade are often built by preference on islands close to the shore, witness Cyzicus, Syracuse, Tyre, Venice, Bombay, Hong Kong—and Sinope was practically such an island. On the other hand the natural and actual terminus for the land or caravan trade from central Asia was at Trapezus, far to the east, and for that of northeastern Asia Minor, at Amisus, modern Samsun. There was apparently no Greek settlement at Amisus in 400 B.C., and probably not until after the overthrow of the power of Persia at the battle of the Granicus in 334 B.C. were the Greeks allowed to get a footing here or in the interior of Asia Minor. An important Cappadocian product which was exported through Sinope and hence was called Sinopic, was *μικτός*, cinnabar, the compound of mercury from which vermilion and other important colors are made. Strabo, Theophrastus and others compare it with the cinnabar of Spain and speak of its being superseded to some extent by an export from Ephesus in the fourth century. (*J.H.S.* XXXV, 1915, pp. 161-172; XXXVI, pp. 1-15.)

The Battle of Plataea.—In *R. Arch.*, fifth series, II, 1915, pp. 257-320 (5 plans), Colonel ARTHUR BOUCHER discusses the campaign of Mardonius and especially the battle of Plataea. The Greeks were almost defeated on account of the selfish inefficiency of Pausanias; they were victorious because the Athenians were resolved not to be subdued and because the Greek armament protected the soldier against missiles and made it possible for him to fight the enemy hand to hand. The application of these conclusions to the present war is suggested.

Cape Colias—St. Cosmas.—In *Ἀρχ. Ἑφ.* 1915, pp. 134 f., P. KASTRIOTES shows that the discovery of the cemetery of the geometric period at Old Phalerum by Kourouniotes (cf. *ibid.* 1911, pp. 246 ff.) and the recent discovery of the graves of seventeen executed criminals in the same place, prove that this portion of the Attic shore is not "made" land, as Dörpfeld had thought. Therefore the 20 stades given by Pausanias as the distance between Phalerum and Cape Colias, can be properly measured, and bring us to the modern St. Cosmas, as the author argued, *ibid.* 1897, pp. 97-100.

The Labyrinth.—In *R. Arch.*, fifth series, II, 1915, pp. 348-363, the treatise by R. DE LAUNAY on the Labyrinth is continued (see *R. Arch.* 1915, pp. 114 ff.; *A.J.A.* XX, 1916, p. 229). The disk from Phaestus is explained as a liturgic calendar. The borders indicate the divisions of the year. Each face of the disk has a border which encloses a labyrinth. The terra-cotta fragment from Phaestus (Pernier, 'Scavi della mission italiana a Phaestos, 1902-03,' in *Mon. Ant. Lincei*, XIV, 1905, col. 444, f. 54) and the inscribed lead from Magliano (Milani, 'Il piombo scritto di Magliano,' in *Mon. Ant. Lincei*, II, 1893, pp. 42 ff.; Deecke, *Rhein. Mus.* XXXIX, 1884, pp. 144 ff.) are akin to the disk from Phaestus. *Ibid.* III, 1916, pp. 116-126, the tomb of Porsenna, the vase from Tragliatella (Reinach, *Rép. des vases*, I, p. 345), various other monuments, and the Roman *Ludus Troiae* (Virgil, *Aen.* V, 553 ff.) are drawn into the discussion. The Greek dance *γέρανος* is connected with the *Ludus Troiae*. The swastika, spiral, and meander are derived from the labyrinth, the meander from a labyrinth of square plan (relatively late). The upright labyrinth on certain vases is the tower in which the solar virgin is imprisoned.

The labyrinth is associated with the tomb. It is of northern origin and came into the Aegean region with the Aryan conquerors from the north. In *R. Arch.* III, 1916, pp. 295-300, the discussion is continued. The special subject of this instalment is the tholos at Epidaurus, otherwise called the *θυμέλη*. This was the place of the musical contest of the Asclepieia (as Herrlich, *Arch. Anz.* 1898, p. 123, had maintained). The relation of Asclepius to Apollo is well known. At the Ptoion the tholos was called, apparently, *θέατρον*. In Athens the odeum of Pericles was sometimes called *θέατρον*.

Cassandra.—In *R. Hist. Rel.* LXX, 1914, pp. 21-42 (9 figs.), A. REINACH suggests that the Athena of Ilium was the successor of the great Phrygian goddess who may have been worshiped at Troy under the name of Cassandra; that the palladium was the primitive statue of this goddess; that when Cassandra became a distinct personality it was necessary to chain her to the stone which had once symbolized the goddess herself; and that the outrage of Ajax was invented to explain the story of blood on the stone, due to the generative character of the original goddess.

Hippo.—In *C. R. Acad. Insc.* 1915, pp. 439-452, S. REINACH calls attention to the story of Hippo, who cast herself into the sea when captured by the enemy. The legend was popular in the Middle Ages, but is mentioned by only one ancient author (*Val. Max.* VI, 1, 14). The writer argues that Hippo was the name of a sacred horse sacrificed and buried at Erythrae.

Ino-Leucothea.—A study of the goddess Ino-Leucothea in literary passages (Homer, Hesiod, etc.) and in the still more important material of legend and cult suggests that she was originally not a marine goddess but an earth spirit, associated with the child Melicertes as mother and son are so often associated in the worship of the principle of fertility. The legend of her leap into the sea, after which she was called Leucothea, represents a ritual purification and revival of the decaying power of vegetation, and the story of the caldron into which her child was plunged is a survival rather of resurrection magic than of cannibalistic ritual. The cult of Ino and Melicertes, sometimes apparently separately but usually together, seems to have been spread by the Minyans, its home being in Orchomenus, but if the Minyans were Hellenic, the non-Hellenic names may indicate a Cretan origin. Many of the features of the cult are found in Caria or other places within the sphere of Cretan influence, while the Cretan goddess Dictynna-Britomartis was closely akin to Ino. The name Melicertes is entirely distinct from the Phoenician Melcart, and the second name, Palaemon, the Wrestler, belongs to the chthonian boy only as the patron of certain ritual games. (L. R. FARNELL, *J. H.S.* XXXVI, 1916, pp. 36-44.)

Corrigenda.—In *Αρχ. Έφ.* 1915, p. 155, E. N. PETROULAKIS publishes several corrections to his articles *ibid.* 1915, pp. 43-52.

ITALY

SCULPTURE

Figured Monuments in the Archaeological Museum at Milan.—In *R. Arch.*, fifth series, III, 1916, pp. 23-73 (56 figs.), ÉMILE ESPÉRANDIEU begins an illustrated catalogue of the ancient figured monuments in the Museo Archeologico at Milan. In this first article, Greek (four reliefs) and Graeco-Roman

marbles are described and illustrated. The finest piece is a torso of a "Venus pudica" (Reinach, *Rép. des statues*, IV, p. 225, No. 9, p. 233, No. 4) with which a winged Eros was grouped. The monuments described comprise statues, reliefs, sarcophagi, portrait heads, and one capital.

A Manumission Scene.—In *C. R. Acad. Insc.* 1915, pp. 537–551, E. CUG discusses a relief in the collection of Raoul Waroqué at Mariémont, near Charleroi, representing the enfranchisement of a slave (see Reinach, *Rep. des reliefs*, II, p. 164). There are two slaves wearing the *pileus*, one kneeling and the other standing and holding a whip in his left hand. A man, of whom only the right arm and hand remains, grasped the latter by the right hand. In the background stands a man fully draped. There were originally six figures. The writer believes that the scene in the centre represents a *manus adsertio*, the first act in the rite of manumission. The kneeling slave is performing the act of *supplicatio*.

PAINTING

The Frescoes of the Villa of the Fondo Gargiulo.—In *R. Arch.*, fifth series, II, 1915, pp. 321–347 (9 figs.), E. POTTIER discusses the frescoes discovered in 1909 in a Roman villa near Pompeii (*Not. Scav.* 1910, pp. 139 ff., pls. 1–20; Helbig's *Führer*, 3rd ed., II, p. 219; M. Cooke, *J.R.S.* III, 1913, pp. 157 ff., pls. 8–13; G. E. Rizzo, *Dionysos Mystes (contributi esegetici alle rappresentazioni di misteri orfici)*, from *Memorie della R. Accademia di arch., lett. e belle arti di Napoli*, III, 1914, pp. 39 ff., pls. 1–4; *A.J.A.* XX, 1916, p. 233). The frescoes represent scenes of Dionysiac (and Orphic) mystic rites, in part conceived as scenes of the childhood and youth of Dionysus. Except in some details, M. Pottier accepts the interpretations and conclusions of M. Rizzo.

INSCRIPTIONS

An Inscribed Modius.—In *M. Soc. Ant. Fr.* LXXIV, 1914, pp. 215–312 (fig.), É. MICHON discusses a bronze *modius* found at Ponte Puñide, province of La Corogne, Spain, in 1913. It is nearly circular, with a diameter of about 24.4 cm., and an external height of 21.5 cm. It holds 9,650 cubic centimeters. The inscription upon it in two lines reads, *Modii l(ex) juxta sacram jussi[on]em d(ominorum) n(ostrorum) Valentiniani Valent(i)s et Gratiani invictissimorum principum jubente Mario Artemio v(iro) c(larissimo) a(gente) vic(es) p(raefectorum) cur(antibus) Potamio et Qu(i)ntiano principalibus*. The interpretation of *l* after *modii* is difficult. An inscribed *modius* in Florence (Gori, *Insc.* I, pp. 262 f., No. 47; III, pl. I) has long been known.

The Rebellion of Aedemon in Mauretania.—Ptolemy, King of Mauretania Tingitana, was assassinated in Rome by order of Caligula who coveted his wealth (Pliny, *N.H.* V, 1, 11). This caused a rebellion in Mauretania led by a certain Aedemon. An inscription recently found at Volubilis engraved upon the base for a statue shows that the man who put down this uprising was M. Valerius Severus. The title "*civitas Romana*" was conferred upon Volubilis, and the right of intermarriage with foreigners and exemption from certain taxes granted the inhabitants. Two inscriptions in honor of Fabia Bira, the wife of Severus, are also published. (L. CHATELAIN, *C. R. Acad. Insc.* 1915, pp. 394–399.)

The New Fragment of the Laudatio Turiae.—In *B. Com. Rom.* XLIII, 1915, pp. 1–40 (pl.), GIOVANNI COSTA discusses the *laudatio Turiae* (*C.I.L.* VI, 1527) especially the new fragment now in the Museo delle Terme published by Vaglieri in *Not. Scav.* 1898, pp. 421 ff. He refers the inscription to Q. Lucretius Vispillo, consul 19 B.C., who was proscribed in 43 B.C., and his wife Turia, and supplies the lacunae in the Vaglieri fragment as follows:

. UXORIS

Amplissima subsidia FUGAE MEAE PRAESTITISTI ORNAMENTIS: ut ferrem mecum OMNE AURUM MARGARITAEQUE, CORPORI tuo decora, tradidisti MIHI ET SUBINDE FAMILIA, NUMMIS, FRUCTIBUS, callide deceptis ADVERSARIORUM CUSTODIBUS, APSENTIAM MEAM LOCUPLETASTI.

Famam tutata es apsentis, QUOD UT CONARER VIRTUS TUA TE HORTABATUR; non autem te MUNIBAT CLEMENTIA EORUM CONTRA QUOS EA PARABAS, quae fuerunt, cum VOX TUA EST FIRMITATE ANIMI EMISSA.

Tunc agmen ex confertis HOMINIBUS A MILONE, QUOIUS DOMUS EMPTIONE potitus eram cum esset actus EXUL, BELLI CIVILIS OCCASIONIBUS INRUPTURUM et dirupturum, prospere reieicisti atque defendisti DOMUM NOSTRAM.

The Inscription of Zenodorus.—In *B. Com. Rom.* XLIII, 1915, pp. 47–51, N. PUTORTI gives a reproduction of the fifth century Zenodorus inscription found at Reggio, which he had already published in *Not. Scav.* 1915, p. 32. Additional notes accompany the reproduction.

Notes on Engström's Carmina Epigraphica Latina.—In *Eranos*, XIV, 1914, pp. 165–170, V. LUNDSTRÖM publishes a study of Nos. 102, 253, 264 and 306 of Engström's *Carmina epigraphica latina*.

Epigraphic Bulletin.—In their 'Revue des Publications relatives à l'Antiquité romaine' for July–December, 1915 (*R. Arch.*, fifth series, II, 1915, pp. 391–404), R. CAGNAT and M. BESNIER give the text of forty-four inscriptions (ten in Greek, one bilingual, the rest in Latin) and notes on epigraphic publications. An index is appended (pp. 405–411).

COINS

Unpublished Roman Coins.—In *Num. Chron.* 1915, pp. 323–335 (pl.), F. A. WALTERS publishes a few rare or unpublished Roman coins from his collection. Two are contorniates of Augustus (Cassius Celer moneyer), of the ordinary *as* die, struck one on copper (?), the other on brass. These coins, Walters suggests, were early attempts to dignify the emperor by placing his portrait on larger coins than the *as*, or were struck for attachment to military standards. Among other of the coins described are a medallion-size "altar of Lyons" type, and a unique medallion of Nero of the "port of Ostia" type, which the present owner conceives may have been struck to cast into the water as a votive offering at the inauguration of the port.

A Coin of Aemilius Lepidus.—It is suggested by S. P. THOMAS (*Num. Chron.* 1915, p. 520), that the abbreviation PR in the inscription of a well-known coin commemorating a valorous youthful deed of Lepidus (see G. F. Hill, *Historical Roman Coins*, p. 52) may better be read as *proelio* than as *progressus* or even as *praetextatus*.

Varus on Roman Coins.—In *Ber. Kunsts.* XXXV, 1914, cols. 323–328 (5 figs.), K. REGLING calls attention to five coins in the possession of the Berlin museum which have to do with P. Quinctilius Varus.

GENERAL AND MISCELLANEOUS

The Eastern Iron Trade of the Roman Empire.—In the elder Pliny's *Historia Naturalis* is a passage about iron in the 39th book, paragraph 15, as follows: "Of all the kinds the palm is to the Seric iron. The Seres send this with their textile fabrics and skins." In *J.A.O.S.* XXXV, 1915, pp. 224-239, W. H. SCHOFF states that upon this slender authority rests the assumption that steel was brought overland to imperial Rome from far-away China. The Seres of the Romans were as ubiquitous as Prester John of the mediaeval Europeans, whose kingdom was located anywhere from the mountains of Abyssinia to the wastes of Mongolia; and it is not necessary for us to carry the iron-trading Seres of Pliny to far-away China over a difficult, dangerous and expensive land-caravan route, when we know that Indian steel reached the Roman world by ocean-going sailing vessels, and that along that cheap and easy ocean route there dwelt at least two peoples, one in western India and the other in southern Arabia, to whom the name "Seres" was confusedly applied.

Narbonne and Rome.—In *M. Soc. Ant. Fr.* LXXIV, 1914, pp. 153-180, A. HÉRON DE VILLEFOSSE points out that the names of Sextus Fadius Secundus and P. Olitius Apollonius, ship owners of Narbonne, have been found on fragments of amphorae on Monte Testaccio, Rome. This is evidence of the important commercial dealings which the port of Narbonne had with Rome in ancient times.

Gallic Imports into Rome.—In *B. Com. Rom.* XLIII, 1915, pp. 41-46, LUIGI CANTARELLI shows that the disputed question of the amount of Gallic imports into Rome resolves itself into a matter of chronology. The remains of inscribed amphorae from Gaul in the Monte Testaccio are few for the first century, but become more frequent in the second.

Public Libraries and Literary Culture in Ancient Rome.—Under the title *Public Libraries and Literary Culture in Ancient Rome* (Chicago, 1915, University Press. 77 pp. 8 vo. \$1 net), Professor CLARENCE EUGENE BOYD publishes a study of the public libraries in ancient Rome. Twenty-eight such libraries existed in the fourth century A.D. The names of nine, and the locations of seven are known. Such information as is available about each is set forth, its equipment, exterior and interior appearance, contents, management, and the officials and their duties; also the object of the Romans in founding public libraries, and literary culture in the early empire. A bibliography completes the book.

Old Plans of Rome.—In *Arch. R. S. Rom. Stor. Patr.* XXXVIII, 1915, pp. 5-105, C. HUELSEN gives a commentary on and bibliography of the topographical plans of Rome from 1551-1748. He arranges the publications after their archetypes and covers the important printed maps from the point at which De Rossi's standard work on mediaeval plans leaves off up to the beginning of modern topographical study with the publication of Nollé.

A Bibliographical Guide to Latium.—Dr. A. W. VAN BUREN, for twelve years connected with the American School of Classical Studies in Rome, has compiled a *Bibliographical Guide to Latium and Southern Etruria* (Rome, 1916, American Academy. 27 pp.). It consists of a selected bibliography, with comments, for visits to the Museo Preistorico, the Museo Gregoriano Etrusco and the Museo Nazionale di Villa Giulia in Rome, and for excursions to the

great aqueducts near Rome, the Alban Lake, the Alban Mount and the Lake of Nemi, Civita Lavinia, Ardea, Cerveteri, Corneto, Orvieto, Veii, Gabii, Palestrina, Ferentino, the Late Republican villas at Tivoli, Ostia, Hadrian's Villa at Tivoli, Norba, Cori, Terracina, Horace's Sabine Farm, and Subiaco.

A Study of Tibur.—Under the title, *A Study of Tibur—Historical, Literary and Epigraphical—From the Earliest Times to the Close of the Roman Empire*, ELLA BOURNE (Menasha, Wisconsin, 1916, G. Banta. 75 pp. Dissertation.) studies the history of Tibur, its government after 90 B.C. when it became a *municipium*, and the local cults.

Roman Mosaics in Philadelphia.—In the *Museum Journal* of the University of Pennsylvania, VII, 1916, pp. 18–26 (3 figs.), S. B. L(UCE) discusses five examples of Roman mosaic in the museum of the University of Pennsylvania, two of them from Carthage and the rest from Rome. Of the former, one depicts two figures in a boat and probably dates from the middle of the first century A.D.; the other consists of a complicated pattern and dates from the end of the first or beginning of the second century A.D. Of the three pieces from Rome one represents a duck and may date from before the Christian era, another has two griffins, and the third is a piece of *opus Alexandrinum* and dates from Christian times.

The Well of Gévaudan.—In *R. Arch.*, fifth series, III, 1916, pp. 127–134, S. REINACH discusses the lines of the twenty-fourth poem of Sidonius Apollinaris:

*Tum terram Gabalum satis nivosum
Et quantum indigenae volunt putari
Sublimem in puteo videbis urbem.*

By changing *urbem* to *orbem*, he makes the lines refer to a well in which the moon is mirrored. He finds other traces of the tradition that such a well existed.

SPAIN

Terra-Cotta Figurines in Madrid.—In *R. Ét. Anc.* XVIII, 1916, pp. 27–30 (fig.), P. PARIS calls attention to the very important, but little known collection of figurines in the museum at Madrid. They are Greek, Roman, Etruscan, Cypriote, Iberian, and Ibero-Roman. He publishes one (No. 3167), a standing female figure (Fig. 3), which reflects in a remarkable manner the art of Athens between the Persian wars and the time of Phidias.



FIGURE 3.—TERRA-COTTA FIGURINE IN MADRID

FRANCE

Statues from Cyrenaica in the Louvre.—There are in the Louvre seven statues from Cyrenaica and, in addition, two fragments of a sarcophagus adorned with reliefs representing a battle between Greeks and Amazons. The most important of these sculptures are a half figure of a woman, evidently

funerary, a Dionysus, a Medusa head in profile, the head and bust of a Roman lady, acquired in 1906, and a standing figure of a Roman empress. The last mentioned statue was found at Bengazi in 1693 and was for many years at Versailles. (É. MICHON, *M. Soc. Ant. Fr.* LXXIV, 1914, pp. 111-152; 2 figs.)

The Meeting-place of the Druids in Gaul.—In *C. R. Acad. Insc.* 1915, pp. 285-294, G. PLAT argues that the site where the Druids annually met in assembly in ancient Gaul was in the little valley of the Vouzée, which enters the Loir 2 km. above Vendôme. Remains of a temple and of a Gallo-Roman village have been found near the place where the stream joins the Loir. There is a menhir about 1500 m. from there up the Vouzée, and 2 km. further up a second temple. The region deserves careful examination.

Gallo-Roman Antefixes.—In *R. Arch.*, fifth series, III, 1916, pp. 260-271 (7 figs.), W. DEONNA continues his 'Notes Archéologiques' (*ibid.* pp. 74-97, see above, p. 485) with a discussion of some Gallo-Roman antefixes on which a bucranium or a human head or even a plain surface is surmounted by palmettes and accompanied (usually) by rosettes. These are explained as indications of sun worship and are connected with Greek and Egyptian monuments and religious ideas.

Objects relating to the Worship of Isis in Gaul.—In *R. Arch.*, fifth series, III, 1916, pp. 184-210 (24 figs.), E. GUIMET describes and discusses a considerable number of bronzes and terra-cottas found in and near the valley of the Saone, which pertain to the worship of Isis. Similar objects have been found in the Rhone region (*R. Arch.* 1900, i, p. 75; 1912, ii, p. 197). In the valley of the Saone Autun, Clermont-Ferrand, and Trévoux have furnished the greatest number of Isiac objects. Many of these are Gallo-Roman imitations of Egyptian work, and of such imitations many have disappeared.

Iron Utensils in the Museum of Saint Germain.—In *R. Arch.*, fifth series, III, 1916, pp. 211-246 (16 plates of outlines) is a classified and fully illustrated list of the great collection of ancient iron utensils in the museum of Saint Germain en Laye. Most of these came from the Roman villas of the forest of Compiègne. The catalogue and drawings are by B. CAMPION; an introduction is furnished by S. R(EINACH).

GERMANY

An Ointment Vessel of Bronze.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 14-22 (pl.; 3 figs.), R. ZAHN publishes a bronze vessel, with a handle attached to rings, found at Trier in the early part of the last century and now in the Antiquarium at Berlin. It probably served as a receptacle for perfumed oil. It has the shape of a small boy closely wrapped up in his garment crouching over a lantern. It evidently represents a young slave waiting to light his master home. It dates from the second century A.D. The type is known from various specimens.

RUSSIA

The Treasures of the Royal Tomb of Solokha.—In *J. Int. Arch. Num.* XVII, 1915, pp. 3-51 (4 pls.; 8 figs.), I. N. SVORONOS gives an account of the excavation of the royal graves in the tumulus of Solokha, in the district

of Melitopolis, Russia (see *A.J.A.* XVIII, 1914, pp. 408 ff.; XIX, 1915, pp. 103 ff.; p. 203). He thinks the graves to be those of the two sons of Leucon, Spartocus II, who died in 343 B.C., and Pairisades I, who died in 309. The great gold comb is of Attic workmanship. The horseman upon it is Miltiades II, the hero of Marathon, and the other figures perhaps represent Olorus and some petty Greek tyrant. On the silver vase we have in relief Spartocus II and Pairisades I as young princes attacking the towns of Panticapeum and Theodosia symbolized by a horned lioness and a large lion breaking a javelin. The identification is established by means of coins. The scenes on the quiver represent the same princes fighting against the Sindi and the Maeoti. The gold phiale is Attic work of the latter part of the fifth century B.C. He reads the inscription *ἐλευθέρια Ἐρμων Ἀντιοθέναι*, and believes that the vessel was given by Hermon (*Thuc.* VIII, 92; *Plut. Alcib.* 25) to Antisthenes, who is not otherwise known, for having stabbed Phrynichus in 411. The reliefs in three bands representing lions attacking a deer or a stag he thinks symbolize Harmodius and Aristogeiton slaying Hipparchus; Harmodius or Aristogeiton and Leaeana slaying Hipparchus; and Antisthenes slaying Phrynichus. Svoronos argues further that these treasures were sent by the Athenians to the two sons of Leucon in return for gifts of grain made by him to Athens.

GREAT BRITAIN AND IRELAND

The Silver Platter from Corbridge.—In *Jb. Arch.* I. XXX, 1915 (pp. 192–211; 8 figs.), F. DREXEL discusses the rectangular *lanx* from the River Tyne, which was published by F. Haverfield in 1914 (*A.J.A.* XX, 1916, p. 239), comparing it for style, date, place of origin and decorative subject with whatever is known of other similar antiqué pieces. Although dating from late imperial times, perhaps the fourth century A.D., it is quite independent of Roman influence and belongs rather to an eastern series of works, based upon the toreutic art of prehellénistic Greece. The oblong shape and the comparative insignificance of the rim, with its conventional pattern serving merely as a frame for the picture in relief on the bottom, show that it belongs to a late stage in the development by which vessels for actual table use became objects for artistic display. The relief is a somewhat unintelligent copy of an early composition representing a scene, perhaps from the *Cypria*, in which the three goddesses, Hera, Aphrodite and Athena, went to Apollo to ask his advice in their dispute over the Apple of Discord, and were referred by him to Paris. The same subject is found in connection with the Judgment of Paris, on a red-figured crater from Orvieto.

Coinage and Silver Currency in Britain.—Sir ARTHUR EVANS now publishes in detail the “North Mendip Hoard” of silver coins found some half century ago near Bristol. The number of recovered pieces was 2,042, of which the earliest was of the reign of Constans, the latest of that of Honorius. To the description of the coins the writer adds a number of important discussions of the coin-units and their values, of the revival of the London mint under Valentinian I, and of the part played especially by bar and ingot currency in the last days of Roman Britain. (*Num. Chron.* 1915, pp. 433–519; pl.)

Currency-Bars.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 69–76 (fig.), R. SMITH discusses a currency-bar from Salmonsbury Camp, Gloucestershire, now in the Cheltenham museum. It weighs $16\frac{1}{2}$ oz., or $1\frac{1}{2}$ units, the unit being 11 oz. Six sizes are now known, the quarter unit, half unit, unit, unit and a half, double unit and quadruple unit. The writer also notes the sites where currency-bars have been found.

A La Tène Sword in the British Museum.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 107–110 (fig.), R. SMITH publishes an iron sword and scabbard found in the canton of Berne in 1890 and now in the British Museum. It is 30.5 inches long and dates from the end of the period of La Tène II, or about 100 B.C.

An Anthropoid Sword.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 214–217 (2 figs.), H. READ publishes an anthropoid sword found near Ripon, dating from the second century B.C. It is $21\frac{1}{2}$ in. long, including the handle of $6\frac{3}{8}$ in. He also publishes a Viking sword found in the Lea at Edmonton, $39\frac{1}{2}$ in. long.

An Unidentified Object of Late Celtic Date.—In *Archaeologia*, LXVI, 1915, pp. 349–352 (pl.), C. H. READ publishes a stirrup-shaped bronze object recently transferred from the Tower armories to the British Museum. Such objects are often found in late Celtic burials. The writer argues that they were worn on the neck of a horse for ornament and are to be compared with the plumes occasionally worn on horses' necks at funerals. There are thirty-three specimens in the Dublin museum.

Miscellaneous Antiquities.—In *Archaeologia*, LXVI, 1915, pp. 569–572 (5 figs.), Sir ARTHUR EVANS describes a bronze dagger with open work handle of late Celtic date found in a rabbit hole in Hertford Warren; also a bronze fibula of rare type from Beckley, Oxon; and a jet cameo from Rochester. This cameo, which is in the form of a pendant with the head of Medusa, is probably the only example of an ancient British cameo. It dates from the last period of British independence.

Bronze Celts in Ireland.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 253–259 (5 figs.), E. C. R. ARMSTRONG points out that the National Museum, Dublin, has over 1,500 bronze celts which he divides into five classes. By means of maps he shows where the different specimens were found, so far as that information is obtainable.

NORTHERN AFRICA

Quaestiones Cyrenaicae.—In *Num. Chron.* 1915, pp. 249–293, E. S. G. ROBINSON continues his study of the numismatic history of Cyrene and its surrounding district, carrying the discussion and arrangement of the coin-series through the "fourth period" (beginning with the fall of Ophellas in 308 B.C. and the occupation of the city by Magas in the interest of Ptolemy) and the fifth period (beginning with the death of Ptolemy Apion in 96 B.C., who bequeathed his domains to Rome).

Mosaic from Carthage Representing a Race in the Circus.—In *R. Arch.*, fifth series, III, 1916, pp. 247–259 (fig.), L. A. CONSTANS discusses a mosaic (Fig. 4), found at Carthage in 1915. A chariot race in the circus is represented. The *spina*, the *carceres*, the outer façade of the circus, the arrangement for spreading a tent over the spectators, and also the direction of the race and the activities of the *morales* are represented or clearly indicated.



FIGURE 4.—MOSAIC REPRESENTING A CHARIOT RACE

The Arch of Oea.—In *Rass. d'Arte*, XV, 1915, pp. 229–241, 257–262 (pl.; 28 figs.), G. NAVE studies the quadrifront arch of Oea, Tripoli, republishing sketches of older travellers and making reconstructive drawings.

EARLY CHRISTIAN, BYZANTINE, AND MEDIAEVAL ART

GENERAL AND MISCELLANEOUS

Byzantine Churches in Northern Epirus.—In *Πρακτικά* for 1914, pp. 243–260 (16 figs.), PH. VERSAKES gives an account of the Byzantine churches of Northern Epirus, with plans and elevations. These include the churches of Brachgorantzes, Zervati and Kokamia.

Byzantine Paintings at Prevesa.—In *Πρακτικά* for 1914, pp. 219–242 (11 figs.), A. PHILADELPHUS describes the Byzantine paintings in the churches of St. Nicholas and St. Athanasius at Prevesa, as well as the early Christian carvings and inscriptions in the castle and the inscriptions and other remains in the churches of St. Basil, St. Spyridion, and St. John Chrysostom.

Astrologica.—In *R. Arch.*, fifth series, III, 1916, pp. 1–22 (4 figs.), FRANZ CUMONT, beginning with the beautiful zodiac of the *Tres Riches Heures* of the Duc de Berry, discusses other zodiac figures in connection with the teaching of astrology in general, and ends with a summary of an astrological treatise ascribed to the “philosopher Alchandreus,” which is contained in a Latin

manuscript of the tenth century in Paris (Parisinus 17.868). Alchandreus is a corruption of Alexander.

Jewish Profanation of the Host.—In *Arch. Stor. Prov. Nap.* I, 1915, pp. 503–524, G. PANSA calls attention to the Jewish rites of Purim in the Middle Ages as the source of the traditional profanation of the host, in turn the source of countless miracles producing blood relics. The influence of the Longinus legend in this connection is also noted as giving rise to the name of the town Lanciano in the Abruzzi and as forming the basis for the myth of the golden lance and eventually of the holy grail.

ITALY

Interpretation of a Catacomb Scene.—In *N. Bull. Arch. Crist.* XXII, 1916, pp. 95–99 (fig.), O. MARUCCHI studies the figurative graffito discovered in the catacombs of Domitilla. Armellini had offered the interpretation that the seated figure in the cathedra was Sixtus II and that the other who seems to lay hold of him is one of the soldiers come to tear him from the sacred seat. But the action does not seem to be one of violence and such a scene would be completely foreign to the catacomb cycle and spirit. An interpretation more consistent with other known monuments is that a saint is here represented protecting before judgment the deceased who has just taken his seat in paradise.

Early Christian Art in the Museo delle Terme.—In *N. Bull. Arch. Crist.* XXI, 1915, pp. 95–118 (2 pls.; 3 figs.), R. PARIBENI gives an account of the Early Christian monuments, largely from the dismembered Kircheriana, now in the Museo delle Terme. Besides sarcophagi and inscriptions, many of which are important, the pride of the collection is the new seated Christ (cf. *A.J.A.*, 1915, p. 491). This statue is particularly significant as evidence of the conception of Christ as the Master in the western church as early as the third or early fourth century.

The Cross of San Cataldo at Taranto.—In *N. Bull. Arch. Crist.* XXI, 1915, pp. 83–93 (2 figs.), C. STORNAJOLO discusses the opisthographic gold cross of San Cataldo in the cathedral treasury at Taranto. This cross is now preserved in a larger one of silver but was originally stuck in the end of a baton to form a benedictional cross. It is recorded as found at the Invention of San Cataldo 1071 and the name "Cataldus" inscribed on one side seems to be of the seventh or eighth century. The lack of any epithet and the contemporary epigraphy point to the cross as having been the personal property of the saint. The inscription "Cataldus Rachau" on the other side of the cross was probably added subsequent to the Invention. The "Rachau" probably indicates the Irish origin of the saint; Rathau may be intended.

Miniatures at Casale Monferrato.—In *L'Arte*, XIX, 1916, pp. 85–87 (2 figs.), P. D'ANCONA discusses an anonymously illuminated missal and an antiphonary signed "Bartolomeus Rigossi B. pinsit" which are preserved with other liturgical codices in the cathedral library of Casale Monferrato. The former seems to date about 1490, the latter about two decades earlier, for it represents in one initial the vow of a church made in 1467 by Guglielmo VIII Paleologo, Marquis of Monferrato, in case he should have male issue. The school to which the miniatures belong is undetermined.

Trecento Pictures in the Jarves Collection at Yale University.—In *Art in America*, IV, 1916, pp. 207–223 (10 figs.), O. SIRÉN discusses some of the Trecento pictures in the Jarves collection. He makes the following attributions: to Bernardo Daddi, a Vision of St. Dominic; to Taddeo Gaddi, an Entombment; to Giovanni del Biondo, a Christ and the Virgin Enthroned in Heaven; to the Compagno di Agnolo or Starnina, a panel with three saints; to Niccolò di Pietro Gerini, an Annunciation; to his son Lorenzo, a triptych and two separate altar wings with a pair of saints each; to the school of Duccio, a diptych; and to that of Simone Martini, a St. Martin dividing his cloak with the beggar.

Sieneſe Art at San Casciano.—In *L'Arte*, XIX, 1916, pp. 13–20 (8 figs.), G. DE NICOLA discusses Sieneſe paintings in the church of the Misericordia at San Casciano. A Madonna (Fig. 5), a St. Peter, and a St. Francis are assigned to Ugolino da Siena; a Crucifix, to Simone Martini. The three works of Ugolino carry with them the attribution of a polyptych from S. Polo in Chianti, now in the Castello di Brolio. How these paintings reached San Casciano is uncertain, but those of Ugolino probably came from S. Maria Novella, Florence, and that of Simone may be the Crucifix done for the Cappella dei Nove in the Palazzo Pubblico, Siena.

FRANCE

Illuminations from the Atelier of Jean Pucelle.—In *Art in America*, IV, 1916, pp. 98–110 (4 figs.), A. E. BYE attributes to the studio of Jean Pucelle an illuminated manuscript, *Durandus in Sententias*, in the Garrett collection of manuscripts now in the Princeton University library. Besides the far-reaching decorative similarity to Pucelle's signed work there is found in the Princeton manuscript the dragon-fly which he apparently used as a trade-mark. The mark of an assistant named Chevrier, a man blowing a bag-pipe, is also found in a prominent position and it is likely that this assistant did the work in Pucelle's atelier.



FIGURE 5.—UGOLINO DA SIENA; MADONNA;
SAN CASCIANO

The Cathedral of Rheims.—In *R. Arch.*, fifth series, II, 1915, pp. 364–369, is an article by THIÉBAULT-SISSON, reprinted from *Le Temps*, September 28, 1915, in which the cathedral of Rheims and Notre Dame of Paris are compared and the particular excellence of each is pointed out.

The Treasures of Saint-Denis.—In *Archaeologia*, LXVI, 1915, pp. 103–158 (19 pls.; 2 figs.), Sir W. M. CONWAY discusses in detail the treasures of the Abbey of Saint-Denis which antedate the Renaissance. The inventory of 1634, of which three manuscript copies exist, and the writings of Suger, Abbot from 1122 to 1151, are important for our knowledge of the objects destroyed in the French revolution or earlier.

The Mrs. Grundy of Furnes.—In *Burl. Mag.* XXVIII, 1916, pp. 241–243 (pl.), M. CONWAY interprets a miniature in the *Tres Riches Heures* at Chantilly. The illumination which represents John Duke of Berry at dinner is clarified in detail by comparison with the fifteenth century book of etiquette of Aliénor Vicomtesse de Furnes, who primly set down the traditionally correct conventions of her time, and described in detail the proper customs and furnishings of dining-room and bed-chamber according to the rank of those concerned.

Jan van Eyck's Virgin with Donor and the City of Lyons.—In *R. Arch.*, fifth series, III, 1916, pp. 272–294 (15 figs.), F. DE MÉLY discusses the background of the picture in the Louvre (No. 1986) called “La Vierge au Donateur,” by Jan van Eyck. The background is not identical with that of any of the pictures (*e.g.*, the Rothschild “Vierge au Chartreux” or the Munich Virgin with St. Luke) with which this has been compared. That the city represented is Lyons appears from comparison with plans and views of the city which date from the seventeenth century.

UNITED STATES

Mediaeval English Embroidery in the Morgan Collection at the Metropolitan Museum.—In *Art in America*, IV, 1916, pp. 195–200 (2 figs.), F. MORRIS discusses the piece of *opus anglicanum* of about 1290 in the Morgan collection at the Metropolitan Museum, New York.

The Altman Memlings in the Metropolitan Museum.—In *Art in America*, IV, 1916, pp. 187–195 (4 figs.), M. J. FRIEDLANDER discusses the three portraits and the Madonna by Memling in the Altman collection. The Madonna he dates about 1480, Tomaso Portinari and his wife Maria about 1485, the Old Man earlier still.

RENAISSANCE ART

GENERAL AND MISCELLANEOUS

Collections of Objects of Art of the Middle Ages and the Renaissance.—In *R. Arch.*, fifth series, III, 1916, pp. 98–115, SEYMOUR DE RICCI gives a brief account of collections of works of art. Such collections hardly existed in the Middle Ages, except as princes and (far more frequently) churches kept in their treasuries objects which were new when acquired. With the Renaissance the passion for works of ancient art awoke, and works of contemporary art were also collected. The intervening mediaeval art was neglected, as, indeed, collectors almost invariably collect by preference that which is really old or

that which is new. The chief collections and collectors, down to our own times, are enumerated and briefly characterized.

A Set of Ecclesiastical Vestments.—In *Burl. Mag.* XXIX, 1916, pp. 49-56 (2 pls.; 3 figs.), C. E. C. TATTERSALL describes a uniform set of vestments consisting of a cope, a chasuble, and two dalmatics. They formerly belonged to Lady Waldstein, but the cope has been presented to the Victoria and Albert Museum, one dalmatic to the Fitzwilliam, and one to the Metropolitan. The representative subjects of the embroidery are principally standing saints under canopies, but there is an enthroned Madonna on the hood of the cope and a Crucifixion on the back of the chasuble. The decorative figures of mermaids and the grotesque masks are blended with foliage in such a way as to date the set 1500-1520, but neither style, provenance, nor coats of arms give any certain clue to the place of production. Spain seems most likely, though Flanders is by no means excluded.

Notes on Frans Hals.—In *Burl. Mag.* XXVIII, 1916, pp. 186-190 (pl.), L. CUST discusses a monochrome sketch of a young man in Buckingham palace and a portrait of an unknown Dutch lady in the Sackville gallery, two pictures by Frans Hals that were passed over in Bode's selective publication of the works of Hals. Bredius has recently found documentary evidence, here first made public, that the artist's father was Franchois Hals, a cloth maker of Mechlin, and that his mother was Adriana van Geertenryck. It would appear that their elder son, Frans, was born at Mechlin, but their younger, Dirk, March 1591 at Haarlem, where the family had permanently settled. If not actually born at Haarlem Frans Hals resided there from infancy and is native to that school, an artistic descendant of Hendrik Goltzius through Karel van Mander.

ITALY

The Annunciation of San Martino by Botticelli.—In *Burl. Mag.* XXVIII, 1916, pp. 129-137 (3 pls.), G. POGGI publishes documentary evidence that Botticelli painted in the spring of 1481 for ten florins the Annunciation, now divided and injured by rebuilding operations, in the loggia of San Martino. Horne had already made the attribution to Botticelli but this archival evidence besides complimenting the connoisseurship of that lamented critic enables us to fit the fresco into its proper place in the development of the artist between the St. Augustine of Ognissanti (1480) and the frescoes of the Sistine chapel (begun in 1481). The notices also reveal the name of a new *garzone* of Botticelli, Lodovico, who must be taken into account in disentangling the problems of the master's atelier. A further document relating to San Martino also upholds the results of stylistic criticism; it tells, namely, that the Pietà now in the Sala delle Robbie of the Museo Nazionale, Florence, was executed by Giovanni della Robbia in 1515 for 12 florins.

S. Anastasia, Verona.—In *L'Arte*, XIX, 1916, pp. 115-124 (2 figs.), C. CIPOLLA continues his documentary studies of the side chapels of S. Anastasia, Verona, and takes up those with the following altars: Santo Spirito, San Raimondo, Sant' Erasmo, and San Pietro Martiro.

The Aquili Family at Rieti.—In *L'Arte*, XIX, 1916, pp. 88-98, A. S. SASSETTI discusses the works of the Aquili family at Rieti. Of Antonazzo, generally known as Antonazzo Romano though correctly Antonaccio, there is the well-

known signed altarpiece of 1464 and remains of a fresco of the Madonna of the Rosary in what is now the chapel S. Ignazio in the cathedral. By Antonazzo's son Marcantonio, an inferior painter to whom some of the refuse now cast on Antonazzo should be ascribed, though numerous other commissions are mentioned in documents, only the following works are preserved at Rieti: in the Museo Civico, a signed triptych, a Madonna, and a St. Catherine of Siena, the two latter unreasonably labelled Antonazzo; in the cathedral, at the foot of the bell-tower, a documented fresco representing a local miracle of the falling of the bell; at the Seminario a fresco of the Pietà, with saints and angels about. Several other members of the family were painters and found mention in the records.

Sculpture in the Marches.—In *L'Arte*, XIX, 1916, pp. 25–50 (21 figs.), L. VENTURI studies a number of works of sculpture in the Marches. The first



FIGURE 6.—MADONNA BY DOMENICO
ROSSELLI; URBINO

is a wooden Crucifix in the cathedral of Matelica. It has Egyptian rigidity and by exclusion can be assigned to the thirteenth century. At Camerino are sculptures of various periods. The portal of S. Venanzio with a Madonna and a St. Porphyry in the lunette (the statue of the dedicatory saint is lost) falls in the second half of the fourteenth century, though the upper part of the façade was worked on a century later by Polidoro di Stefano, some of whose work can be identified. The tomb of St. Venantius within the church is by the artist of the portal, a provincial Tuscan closely related to the Siense. The tomb of St. Ansovinus in the cathedral of Camerino, dating from about 1400, is the work of an inferior local artist and extensively restored, but it derives ultimately also from the Siense style of Tino da Camaino. Siense in

character, too, is the gilded wooden Madonna Misericordia in the same church. The monument of Antonio da Montefeltro (died 1404) in the Ducal palace at Urbino, though formally Siense, is in its decoration and exceptional polychromy Venetian. There are important Venetian sculptures in this locality, as the decorations of the choir and the Brancaloni monument in S. Francesco at Mercatello; the Malatesta monument in S. Francesco at Fano by Filippo di Domenico da Venezia, whose influence is visible in the Brancaloni monument just mentioned; and the Crucifix by Antonio Bonvexin, originally colored by Jacobello del Fiore, in the church of Castel di Mezzo. Tuscan, however, is the Annunziata in S. Filippo, Sant'Angelo in Vado, and

in the later Quattrocento the Tuscan influence was paramount. An important work, heretofore unnoticed, is a Madonna relief (Fig. 6), attributable to Domenico Rosselli in S. Giuseppe, Urbino. The sarcophagus of the monument of St. Nicholas in his own church at Tolentino, dated 1474, shows the influence of Agostino di Duccio, but the figure of the saint suggests rather the Venetian influence of Antonio Rizzo.

Notes on Italian Medals.—In the twenty-first instalment of his notes on Italian medals in *Burl. Mag.* XXIX, 1916, pp. 56–59 (pl.), G. F. HILL describes a medal of an unidentified man dating about 1500, two others of about 1530, one of an unknown woman of the middle of the century, and one of Giambattista Pigna by the medallist Bombarda.

Italian Wafering-Irons.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 161–200 (12 figs.), W. L. HILDBURGH discusses the designs upon Italian wafering-irons of the fifteenth and sixteenth centuries. He gives illustrations of fifty-four specimens which he describes fully. Twelve others are described, but not reproduced.

The Art of Correggio.—In *L'Arte*, XIX, 1916, pp. 1–12 (15 figs.), A. VENTURI traces with characterization of the successive stages the development of the art of Correggio. *Ibid.* pp. 72–84 (34 figs.), the same writer discusses the dome frescoes of Parma cathedral.

Architectural Designs of Richino.—In *Rass. d'Arte*, XV, 1915, pp. 224–228 (4 figs.), P. MEZZANOTTE publishes a design by Francesco Maria Richino for an arch at the Porta Ticinese of Milan, intended to honor the nuptial festivities of Philip III of Spain and Maria Anna of Austria. Two designs by Richino for equestrian statues are with the drawing above in the Bianconi collection of the Castello Sforzesco, Milan, and they probably belong to plans for the adornment of the Piazza del Duomo at the same period.

The Miniature of Sano di Pietro.—In *Rass. d'Arte*, XV, 1915, pp. 218–223 (8 figs.), F. SAPORI discusses the miniature painting of Sano di Pietro and in particular the antiphonary No. 15 of the Siena cathedral library.

Documents on Neapolitan Artists.—In *Arch. Stor. Prov. Nap.* I, 1915, pp. 592–604 and II, 1916, pp. 146–157, G. D'ADDOSIO continues his publication of documents from bank records on Neapolitan artists of the sixteenth and seventeenth centuries.

Gianfrancesco Rustici.—In *Burl. Mag.* XXVIII, 1916, pp. 171–178 (2 pls.), G. DE NICOLA makes a number of attributions to Gianfrancesco Rustici, important as the exponent of Leonardo's principles in sculpture. Vasari mentions a *Noli me tangere* by Rustici, a low relief in terra-cotta which the artist had to take to be glazed by Giovanni della Robbia. It was made for the nuns of the convent of S. Lucia, suppressed in 1808. This relief has hitherto been variously and consequently unconvincingly identified. A comparison with Rustici's famous Preaching of St. John the Baptist over the north door of the Florentine baptistery allows the *Noli me tangere* from S. Croce in the Bargello to be identified as the work of Rustici. With it there fits a lunette relief of St. Augustine, not mentioned by Vasari, which had been in the Annunziata and subsequently passed into the Accademia but is now recomposed with its companion piece in the Museo Nazionale. Another low relief there, a marble tondo Madonna and Child with the Infant St. John, hitherto attributed to Andrea Ferrucci, shows also the stylistic peculiarities,

the combination of the Leonardesque with the Michelangesque which was characteristic of the art of this sculptor. Other ascriptions are a marble tondo of the Infants St. John and Christ in the Schlichting collection, Paris, and a small terra-cotta group of a man on horseback overthrowing an enemy in the Horne collection, Florence. The latter and some inferior terra-cottas show direct derivation from Leonardo. The candelabrum mentioned by Vasari as made by Rustici for the Arte di Calimala is incorrectly identified as the one still preserved in the Museo Nazionale, which has not the arms of that guild but of the Parte Guelfa. The works cited, however, together with Rustici's marbles and terra-cottas for the Villa Salviati, now Turri, form a broad basis for the reconstruction of the artist's personality.

Raphael's Drawings.—In *Burl. Mag.* XXVIII, 1916, pp. 144-151 (2 pls.), M. CONWAY presents in brief form the results arrived at in the first part of Oscar Fischel's monumental publication of the drawings of Raphael.

GERMANY

Herman Rode.—In *Burl. Mag.* XXIX, 1916, pp. 115-125 (3 pls.; 3 figs.), there is a discussion, based largely on Lindblom's recent book, of the work of Herman Rode, an artist of Lübeck whose altarpieces were made generally for Swedish churches.

GREAT BRITAIN

Stained Glass of the Thirteenth Century at Durham.—In *Proc. Soc. Ant.* XXVII, 1915, pp. 205-213 (5 figs.), Canon J. T. FOWLER describes three panels of stained glass of the thirteenth century in Lanchester church, Durham. The subjects represented are taken from the life of Christ. They are the Annunciation to the Shepherds, the Adoration of the Magi, and the Flight into Egypt. This glass formed part of the original decoration of the church.

The Tomb of Lady Margaret of Beaufort.—In *Archaeologia*, LXVI, 1915, pp. 365-376 (2 pls.), R. F. SCOTT publishes the contract for the tomb of Lady Margaret Beaufort, mother of Henry VII, in Westminster. This document, which is dated November 23, 1511, proves what had been supposed, but not positively known, that the tomb was the work of the Florentine Pietro Torrigiano. The grating about the tomb was made by Cornelius Symondson.

The Heraldry in the Cloisters of Canterbury Cathedral.—In *Archaeologia*, LXVI, 1915, pp. 447-568 (10 pls.; 11 figs.), R. GRIFFIN describes the shields with heraldic devices, 846 in number, in the cloisters of Canterbury Cathedral. They were put up in the time of Prior Chillenden, who held his office from 1391 to 1411. Many of the shields are reproduced.

UNITED STATES

Venetian Paintings in America.—In *Art in America*, IV, 1916, pp. 61-84 (11 figs.), B. BERENSON continues his series of studies on our own Venetian pictures with a chronological arrangement of the Madonnas of Giovanni Bellini. The uniform series of seated Madonnas seen down to the waist or below are in chronological order: a Madonna of about 1475 in the Platt collection; one dating almost 1480 and more or less a studio product in the possession of G. L. Winthrop, New York; one but slightly later owned by Mrs. H. E. Huntington, New York; the Madonna of the Metropolitan Museum; and

that belonging to W. Salomon, New York, painted about 1485. *Ibid.* pp. 204-207 (fig.), is added to the list a similar Madonna of about 1488, newly acquired by J. N. Willys, Toledo. *Ibid.* pp. 133-141 (pl.), the St. Francis recently added to the Frick collection is identified as the picture mentioned by the "Anonimo Morelliano" begun by Bellini for Giovanni Michiel. It is stylistically dated to about 1480 and the Basaiti attribution ridiculed.

Scipio Tapestries in America.—In *Burl. Mag.* XXIX, 1916, pp. 59-66 (3 pls.), G. L. HUNTER discusses the Scipio tapestries now in America and describes in detail four that have recently been imported from the "Duc de X" set at Madrid. These four are all of the earliest period, first half of the sixteenth century. All are signed with the Brussels mark in the bottom selvedge. One, the Burning of the Numidian Camp bears the monogram MC, *i.e.*, probably Marc Greif who wove the destroyed Scipio set of Francis I and the Joshua set at Vienna. The other three, the Mural Crown Awarded to Laelius, the Approach to Africa, and the Conference of Scipio and Hannibal, each have the monogram of the Zenobia set at Vienna, HM, *i.e.*, probably Hubert de Maecht. These tapestries are in fine condition and form an important addition to those already on this side of the Atlantic.

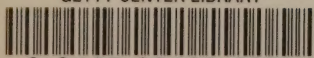
AMERICAN ARCHAEOLOGY

GENERAL AND MISCELLANEOUS

Old Peruvian Weaving.—In *Jb. Preuss. Kunsts.* XXXVII, 1916, pp. 181-198 (2 pls.; 17 figs.), E. SELER discusses the figures on old Peruvian pottery in which there are human heads and fantastic bodies, sometimes human and sometimes animal, bird or serpent. Similar designs are found on woven fabrics of the same date. The writer publishes one of these, a piece 2.52 m. long and 1.01 m. wide, recently acquired by the Museum für Völkerkunde, Berlin. On a purple background are thirty-eight demons arranged in seven rows, and in each of the four corners is another queer demon. The figures represent a friendly demon bringing down from heaven beans and manioc to mortals. *Ibid.* pp. 199-201 (3 figs.), M. SCHMIDT discusses the technique of the weaving.

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